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LONDON SCHOOL OF HYGIENE
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(DEPT OF MEDICAL STATISTICS)

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JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1865.

Opening Address *of the* President *of the* Department *of* Economy *and* Trade, *at the* Meeting *of the* National Association *for the* Promotion *of* Social Science, *held at* York, *in September*, 1864. *By* Edwin Chadwick, Esq., C.B., *Corresponding Member of the Institute of France.*

At this meeting, in the vicinity of the most considerable manufactures in the empire and in the world, we are compelled to give our most serious consideration to the chief social and economical questions which have arisen from the external civil war that has shaken our gigantic system of cotton textile production almost to its foundation. To elucidate the economical principles which govern its progress and influence the condition of the people engaged in it, I beg to submit some facts derived chiefly from early examinations as a commissioner of inquiry charged with the preparation of the bill by which official inspection for the regulation of labour in the textile manufactures, and also the half-time system of labour and instruction for young children, were introduced.

Progress and Position of the Cotton Manufacture in England.

§ 1. At Calicut, at the extremity of India, from whence calico was first derived, a poor Hindoo spinstress, with a primitive distaff, spins, from cotton grown on the spot, in a day about a mile of thread, for which she earns 2*d.*; or for the labour of spinning a pound of the sort called forties, 19 miles in length, she earns 3*s.* There, too, a poor Hindoo weaver goes from place to place, spreads in the open air a loom of a more primitive construction than the sort depicted on the pyramids, in a space under a tree, for which he pays no rent, and weaves the yarn so spun into a web of cloth, at wages of little more than a handful of rice a day. From that same district the Anglo-Saxon buys up the growth of raw cotton, conveys it, by expensive land transport on horseback to a vessel, in which, perhaps, more than 20,000*l.* have been invested, carries it a distance half round the world, to a port whence it is conveyed by steam-power to a manufactory containing machinery, the result of the genius of Watt, Arkwright, Crompton, and others, in which perhaps 100,000*l.*

of capital have been invested—in which there is steam-power exceeding that of 3,500 men, impelling 150,000 spindles, delivering nearly 500 miles of thread a-minute, or during the day, a length of thread that would wrap twelve times round the world. This machinery, which does the spinning, is attended to and fed and ministered to by about 1,000 servants—men, women, and children—at wages, on the average, to each of about ten times more a-day than those of the Hindoo spinstress. The yarn so spun is taken to be woven in an immense shed, comprising machinery, in which some 80,000*l.* of capital is invested on a thousand power-looms, attended to by men at 2*s.* 6*d.* a-day; the web so wrought up is usually printed in another great establishment, where the genius of chemists has been brought to bear for its decoration, and it is carried back again to the extremity of India, and the labour of the poor Hindoo spinstress, and also that of the poor, rentless, rateless, and taxless Hindoo weaver, is undersold, and though they work for the barest existence, their industry is superseded even with their own material taken from the spot. As illustrative of the progress of this manufacturing system, and with it the progressive reduction of manufacturers' profits, on the piece, I have been told that there were persons recently living who saw a stockingless boy carrying milk in the town of Bury—saw that boy become a cotton printer by hand, then a great manufacturer by machinery, then a member of parliament, and a baronet with a princely fortune, the father of a prime minister, and the founder of a house of statesmen. On a late visit to Manchester, I was shown some cotton cloths, printed with dyes brought from India, of a pattern and sort printed by the first Sir Robert Peel, that were to be sent out to India and sold there, cloth, printwork, and all —at about half the price at which he had made his great fortune for printing alone. Nor, as respects India, is this success confined to inferior fabrics for common use. A lady, the wife of an eminent cotton manufacturer, went to him one day rejoicing, with a fine piece of muslin as the produce of India, which she had bought in town, and showing it to him, said, "if he produced a fabric like that, "he would really be doing something meritorious in textile art." He examined it, and found that it was the produce of his own looms near Manchester, made for the Indian market exclusively, bought there, and resold in England as rare Indian manufacture. In Manchester they can spin the yarn for that "woven wind," for a transparent cloth, such as is seen on the Pompeian pictures, and such as Indian princes prize for the beauties of their harems; and the rare industry of Mosul on the banks of the Tigris—the Mosullaine—will be overthrown. In the International Exhibition there was thread spun by the Messrs. Holdsworth, a pound of which was 320 miles long. In 1860, Great Britain, exported 240 millions of pounds of

yarn and goods to India, and was fast becoming the clothier of its population. But wages there are rising under this industrial influence, and the natives would do better to betake themselves to the culture of cotton, of indigo, and of teas, for all which labour is in demand, than to compete with machinery in working up cloth for themselves. If revenue and protective duties were withdrawn, scarcely any foreign manufacture could withstand the British capital and machinery. Austrian and French manufacturers have told me that if they were free to invest their capital in manufacture, they would prefer to invest it, even in the district of restricted half-time child's work and the short time adult Lancashire labour. Pashas of Egypt have tried to manufacture the cotton grown on their own territory, and have been beaten. Even our American relations, with superior cotton on their own territory, can only defend themselves by tariffs against the superior productive power of Lancashire. The progress of our cotton production may be represented by the fact, that the cost of the pound of No. 40 yarn cotton included was in 1812, 2*s.* 6*d.*; in 1830, 1*s.* 2½*d.*; and in 1858, 11*d.*

Effect of Manufacturing Distress in stimulating Manufacturing Improvement.

§ 2. Now it is to be observed, and the observation, though an unpalatable one, is important to be made at the present time, that this great manufacturing improvement has been due mainly to successive periods of manufacturing distress. It was an axiom of the late Mr. John Kennedy, who was called the father of the cotton manufacture, that no manufacturing improvements were ever made except on "threadbare profits." When the trade is doing well, the axiom is, that they cannot be better than well, and they remain as they are. But when the market is overstocked, or when from any other cause, there is no sale at the then prices, the manufacturer, whose machinery is unemployed and large capital wasting, is in the position that it is better to go on even with serious loss, for a time, than have his machinery deteriorated by want of use, and his organised labourers, whom he may not get together again, dispersed by stoppage. In such crises his nerves are strained, as much as any officer's in a military command, and his mind is tasked, even with the aid of new divisions of labour, of brokers to buy his raw material, and of agents to have an outlook and sell his produce. Being under heavy penalties for every day he fails to find work and wages for his corps, he is driven to his wits' end to exercise invention, and listens greedily to any which bids fair to cheapen production, lower prices, and stimulate consumption. A manufacturer loudly complains of distress, but he is not believed, because he is seen to be extending his works: really he is extending his works

because he is distressed, for he is trying to spread establishment charges over a larger amount of production, and thus reduce its cost. The reduced prices, obtained by such improvements, including mechanical labour-saving improvements, stimulates consumption amongst a lower and more numerous grade of society, and places it on a wider and steadier basis; there is an improved demand, and restored net profits, on the wider sales at reduced profits; and a restored and increased demand for labour, and an advance in wages. Manufacturing distress, moreover, promotes the extension of foreign consumption. Stocks of goods being unsold and on hand, the manufacturer oes not like to go about with "sacrifices," or throw them upon the depressed market at home. He has a young fellow, a son, or some one else whom he trusts, and he sends him abroad with a shipload of goods like a travelling packman—on a venture to most remote parts of the world, to get any produce in return for them: ivory, skins—anything that will sell at home, or anywhere else. The foreign purchaser of cotton prints, who has got these adornments at low prices, has a strong motive to get them on the backs of the natives, and once on them, there is admiration and a permanent demand for them, as there is now, not only in the remote parts of India, but in China, Egypt, Asia Minor, Greece, Turkey, Persia, Mexico, and the Brazils. By such successive adventures under pressures of distress, the consumption and production had been raised in 1860 to 76 millions, or 6 millions more than the gross revenue of the United Kingdom; of which the declared value of the exports was 52 millions. The wholesale dealers put 10 per cent. generally on the price of the manufactured article, and the retail dealers generally add to that 20 or 25 per cent., or, on the whole, some 7 millions to the 24 millions paid for the cotton produce consumed at home.

§ 3. This great extent of production and of consumption could not have been attained, and sustained under difficulties, and have prospered by the mechanical inventions and appliances, having got into the hands of a population whose power of patient steady work, especially the females, is by foreign workmasters admitted to be unsurpassed, if it be anywhere equalled. Herodotus relates that Darius, the great king, amongst the various races by whom he was surrounded, once observed a woman of one of them leading a horse from the water and carrying a vessel of water on her head, and at the same time plying a distaff as she went along. He was struck with this display of industry, and being told that it was characteristic of her tribe or race, he ordered that the people with such precious qualities should be removed for colonisation within his own dominions. The men as well as the women of these northern districts might have sprung from that race. As against them all

other, the lowest paid labour that has been tried, that of the Hindoo and the Fellah of Egypt, even with British machinery and British taskmasters, has everywhere hitherto failed.

How Manufacturing Improvements Augment Wages.

§ 4. But what has been the effect upon wages of the continued reduction of price of production, the consequence of the repeated pressures of distress? For a long time it was maintained, and sometimes it is now maintained, and it is illustrative of the state of information that it should be so maintained, that the effect of these improvements has been continually to reduce wages. In some branches it really has been so, as in the instance of hand-loom weaving, which at first was a labour for the production of high priced goods for the supply of the few. At the beginning of the century, 1*s.* a pound was paid for the spinning of a pound of cotton yarn of shirtings, of number forties. In 1830 it was 7½*d.* Now the cost of spinning a pound of that same yarn, which the Hindoo spinstress could only spin for 3*s.* by the distaff, is by machinery only 3*d.*, interest on capital, wear and tear of machinery, and the agency of the attendants called spinners—all included. But in the beginning of the century the wages divided amongst the workers engaged in a cotton spinning manufactory amounted only to 4*s.* 6*d.* per week per head:—now in periods of full work it is 10*s.* 6*d.** and 11*s.* per head, man, woman, and child—averaging 30*s.* per week amongst a family of three, or 40*s.* to a family of four, namely, for a man, at least 18*s.* 6*d.*; woman, 10*s.*; boy, 7*s.*; girl, 5*s.* The tendency of the pressure of hard times in the manufacturing districts has been, and is, to put more and more of machinery and capital under the superintendence of one person. But this is to require more and more of intelligence and trustworthiness, of discretion as well as skill. The machinery which has been under the care of two men at 18*s.* a-week, is in hard times, for the sake of economy, put under the care of one; but this one must be a man of higher order of discretion and trustworthiness, and he must have wages which will give him an interest and responsibility in his work, and one at 25*s.* or 30*s.* is got, or double the actual money wages in the agricultural districts. This is a tendency in other branches of manufacture, and hence wages in various branches have been advanced, notwithstanding manufacturing distress, and indeed in consequence of it. Thus in 1842, the wages paid by Mr. Henry Ashworth for the production of 20 lbs. of yarn

* I believe this to be an under estimate. The Blackburn Relief Committee have made a recent report, in which they show that the earnings of 25,865 persons —men, women, and children—cotton workers, who were thrown out of work during the cotton famine, had averaged 11*s.* 5*d.* per week, and Blackburn is not a place noted for full wages. Added to these were 3,000 mechanics dependent on the cotton manufacture, whose wages had averaged 25*s.* per week.

on 800 spindles were 4*s.* 7*d.*, a spinner, or rather a superintendent of machines being employed, who earned 20*s.* per week. In 1859, however, 1,600 spindles were put under the care of one man, with a little extra assistance from boys, and only 3*s.* 11½*d.* is paid for the production of 20 lbs. of yarn, but his net earnings in full work, had attained to 30*s.* 10*d.* per week.

§ 5. The sort of common cotton cloth for the weaving of a piece of which by hand thirty years ago 5*s.* was paid, is now woven by power for 11*d.*; the hand-loom weaver then earning 10*s.* a-week; the power-loom weaver, or superintendent of the weaving of three power-looms, now earning 16*s.* and 17*s.* a-week. Of late, difficulties have been overcome at Manchester in the application of the power-loom to the weaving of various sorts of silk. Our interests are in the social and economical advancement of our neighbours, and there are great divisions of labour for the ample future occupation of the working classes of France as well as of England. I beg permission, in passing, to call the attention of my *confrères* of the Institute to the fact, that the manufacturers of Lyons and other places may be warned, that unless they make advances in the use of power, and improve the condition of the wage classes by it, their hand-loom labour may be superseded, for the power-loom takes the same relative position to the hand-loom in silk that it does in cotton. M. Jules Simon observes, that heretofore the manual labourer has been an intelligent force, but by machinery he is converted into an intelligent director of force. In our most improved manufactures, however, the services of a few are required as intelligent directors of force, and of the many rather as intelligent attendants upon it. If the French manufacturers adventure upon the new machinery and its contingencies, I must presume that they will have no difficulty in obtaining the intelligent services needed for it from amongst their own people; but they must adopt the machinery or give up the manual labour. Manchester awaits their determination.

§ 6. The progress of machinical production and of wages might be more strikingly illustrated in another field of industry, that of the lace-making trade of Nottingham. In 1810, a lace-making machine made a square yard of plain lace in two hours, and the finished yard was sold for 5*l.* Recently the machine made a square yard of the same net in five minutes, and it was sold in 1856 at 6*d.* Notwithstanding prohibitory tariffs, the effect of the Nottingham production on much of the poorly paid hand-labour of Belgium was similar to that of the cotton yarn and cloth of Lancashire on the hand labour of the Hindoo spinstress and the weaver. The wages for plain lace-making has advanced from 20*s.* to 21*s.* per week for men, and from 12*s.* to 16*s.* for boys. For ornamental lace the wages are higher. For a long time English ladies re-smuggled back from

the continent lace that had been smuggled there from Nottingham. Roman Catholic priests in Belgium and elsewhere, have adorned themselves with lace vestments, and have celebrated their rites before altars decorated with new and gorgeous lace cloths, imagining them to have been wrought in nunneries, or by the faithful of the Roman Catholic flock; but the hand-labour of the poor pillow workers of that flock, toiling hard at a rate of five meshes a minute, for poor wages, which rendered unnecessary the prohibition of the use of meat on the Friday, and made their whole lives a severe fast, was superseded by the Nottingham machine-made vestments, produced by the machine at the rate of a thousand meshes a minute, under the superintendence of men whose wages for fancy work were 50*s.* or even 60*s.* a-week. Machinery now appears to stay at nothing done by hand, provided there be sufficient numbers required to pay for its construction and use. As relates to the effect of the latest new machinery on wages, I may mention that the wages generally earned by the sewing machine, I learn from manufacturers, are more than double the average previously earned by needle women.

How Stability Increased under Pressure of Distress.

§ 7. In the great stricken branch of the cotton manufacture, the earnings of 440,000 persons, of whom 90 per cent. were adults, and 56 per cent. of the adults, females, for attending to the working of machinery impelled by steam-power equal to upwards of 2,000,000 of men, averaged about 11½ millions of money a-year. Viewing this extraordinary combination of mechanical art and science, and of labour in production—the greatest that has been seen, economists and eminent leaders of industry in the neighbourhood had long expressed serious alarm that such vast interests should be apparently so entirely dependent on one source of supply and on one fibre. I might quote the speeches of southern slaveholders or leaders in their war of secession, that so absolutely did the very existence of Great Britain appear to be dependent on the continuance of the supply from them, that they imprudently relied upon it, for compelling the interference of England in their behalf, even for the maintenance and extension of slavery. Some of them went so far as to propose that the exportation of cotton should be prohibited, in order by starving the cotton manufacturing population to compel the acknowledgment of the Confederacy. As events have occurred, I believe it would have been well for England if every pound of the store of cotton in the possession of the Confederates had been at once burned, in order that exertions for the development of supplies from new sources might not have been weakened and delayed as they were, and are yet, by the apprehension that by peace or the fortune of war, the large amount of cotton hoarded up might at any time

be let loose upon the market to the ruin of investments in new and necessarily more expensive sources of supply.

§ 8. I have indicated some of the leading economical facts influencing production, distribution, and the progress of wages for the past, to see what economical and social lessons may be deduced from them for the future. It is to be observed, however, that the character of the distress brought about by the American civil war, differs from all preceding causes of considerable manufacturing distress in this, that whereas they, as I have described, tended, by reducing prices, to extend consumption; this privation of more than eleven-thirteenths of the supply of the raw material, so enhanced its cost as vastly to raise the price of the manufactured material, and throw back manufacturing progress in that respect by half a century. Had not the use of the article been widely and strongly fixed in the habits of the consumers, the effect must have been extensively and permanently destructive. As the supply now stands, from all sources, it may be said to be at present about 32 against 47 of the supply in 1860, and in price $28\frac{1}{2}d.$ against $3\frac{1}{2}d.$ per lb. in 1860. It is estimated that less than two-thirds of the previous number of workers are now engaged in the manufacture, the rest having migrated, or changed into other service, or emigrated. To those now employed, wages are nominally at the same rate, but really considerably less, in consequence, as stated, of the increased difficulty of working the Surat and other inferior cottons, and also from their being employed at short time.

§ 9. The first effect of the present distress will, however, seemingly be to diminish future danger, by relieving the manufacture of the present extent of dependence on one source. The delay of a renewal of the American supply is now regarded complacently by many, as having, at all events, a compensation in allowing more time for the training of labourers and the organization of the new cultures in other countries, which a sudden cessation of the civil war, and the liberation of the embargoed stores of cotton in the Confederate States, might check or destroy. If, however, the event of the civil war should be, what many are unwilling to believe, the destruction of the institution of slavery, from information on which I myself rely, as to the effects of the conversion of slaves into free labourers, working for wages and at piece work, and from the additional produce already achieved by coloured free labour on the estates formerly cultivated by slave labour, a considerable augmentation of the produce of raw cotton may be anticipated from thence, in two or three years' time. The cotton cultivation of India, or the rude labour of other places, will not, it is generally believed, withstand the culture of America, especially the free culture, the promise of which free cultivated cotton farms appear to justify. To what

extent the culture may elsewhere be improved in quality and increased in quantity, time only will show.

Fields for Extended Consumption of Textile Manufactures.

§ 10. Inquiries which I have myself made into the domestic condition of the wage classes of our own population, lead me to the conclusion that they are even now very imperfectly clad, and that the consumption of cotton amongst them is not above two-fifths of what perhaps it would be, if all were as fully provided as are some few, who are frugal and good managers. Large classes of people have only two shirts, one off and one on. Not half, perhaps, of the children or of the adults throughout the country have stockings. Before the "cotton famine," the supply of wool did not keep up to the increasing demand for woollen clothing. There are yet greater deficiencies in the clothing of the wage classes of other countries. No doubt popular clothing admits of great improvement in the qualities of warmth preserving, combined with lightness, cleanliness, and wear; and constant changes may be expected in the adaptation of fibres for these purposes, as well as for decoration, and for all other purposes. But our steam-power and machinery and capital will probably keep us in a foremost position for clothing the masses of the people of the world. We may conclude, therefore, that not only will the hands which have migrated or changed to other temporary occupations be required again, but that a large and increasing number of hands must be sought to superintend the action of a vastly increased amount of steam-power, and new machinery for textile production.

The Demand for Labour in advance of the Quality available.

§ 11. Looking at the present as well as the past condition of the wage classes* of the manufacturing population; looking at the great physical evils attendant upon its present condition, of which the excessive sickness and death-rates are exponents; looking at the excessive moral evils of debauchery and unthrift which have accompanied it, of which the statistics of pauperism, as well as penal statistics, are also exponents,—there is good ground for the opinion

* I object to the term "working classes," as involving mischievous fallacies and prejudices. "Manual labourers" is also objectionable, for manual labour, even the lowest, if properly performed, involves a greater or less proportion of mental labour. "Mental labourers" is objectionable too, for the occupations so designated involve manual labour, commonly with the pen, or severe bodily constraint, often worse than active bodily labour. The Lord President of the Association is a "working man," who would have outworked several of the working men properly so called. An industrial leader, the head master of a manufactory, is often really the hardest working man in it. It appears to me, that the term wage classes is free from the objections stated, and others, and that it denotes really the leading characteristic distinctions.

of reflecting men that the manufacturing system, or this portion of it, has come upon the country too fast, that is to say, before the population was prepared by education and social progress for its good management, or the satisfactory application of the increasing produce of the manufacture in wages. It is just, however, to observe that the social effects deplored are not peculiar to the textile manufactures or to this one branch of them. In other branches, wheresoever there have been large aggregations of men for new manufactures, or large new works—assemblages of navvies for example—without order or preparation as to their domestic conditions and relations; high wages, and especially high and greatly fluctuating wages, are equivalent to an excess of drink. Nor are the evils peculiar to our own manufacturing populations. They have attended the extension of all the textile manufactures of France. They have been the subject of able and anxious examination by eminent men of science of France and of Europe, comprised in the Academy of Moral and Political Sciences in the Institute:—Villerme, Louis Reybaud, and Jules Simon. Their reports and works display deplorable physical and moral degradation attendant upon the progress there of mechanical production, some of it of a darker character than the evils presented to myself and my colleagues of the Factory Commission of Inquiry into the Effects of the Labour in the Textile Manufactures of Great Britain. Those who would see the social general results developed by the latest inquiries in France, will conveniently find them displayed in a recent work of Jules Simon, "l'Ouvrière."

Improvement available for the present Wage Classes.

§ 12. Another important subject before us is,—What may be done socially or by legislation for the improvement of the present manufacturing population? What may be done for the population which is coming, to prevent or mitigate the social and economical evils attendant upon the past? And first, what may be done to avert or mitigate the periodical recurrence of distress and outcries for external sympathy and aid; for, although it is to be hoped that nothing so extraordinary may again occur, as that which has arisen from the large loss of the supply of the raw material, yet experience warrants the anticipation of recurring disturbances from over production, from under consumption, from bad harvests, from changes of fashion, and from improvements in machinery. Change must, therefore, be regarded as a normal condition of our manufactures to be provided for in the interests of ratepayers, as well as of the employed.

§ 13. In addition to the improvement which is to be looked for from an extension of several sources of the supply of the raw pro-

duce, as a means of preventing for the future the violent shocks and inconveniences occasioned by an almost exclusive dependence on one, there is a lesson of domestic prudence, on the like principle, the expediency of which, for families of the wage classes, ought to be strongly impressed upon them, namely, to avoid, as much as they can, having all the working members of the same family engaged in the same manufacture. The intensity and bitterness of the late suffering in these districts has been proportionable to the exclusive occupation of neighbourhoods, as well as families, with one manufacture. In places where cotton mills were isolated, or where those engaged in the manufacture have only formed a minority in the manufacturing population, members of the same family were more frequently engaged in different trades. If there was only one member of a family, or of a circle of relations, out of three, engaged in the paralysed occupation, he commonly derived aid from the other two of his relations who were in full work; if not in money, in a share of their meals. But for such family and friendly assistance, and the assistance from friends amongst fellow-workmen, the public pressure of the late famine would have been far more severe. I learn from the continent, that the shock has fallen there heavily or lightly in proportion as there has been a mixture of employments. The lesson taught, as to the distribution of members of the same family in different occupations, is in accordance with the common household proverb, "Not to have all your eggs in one basket." The expediency of this recommendation is disputed in the interests of manufacture; and there certainly are economical advantages in the aggregation of establishments of the same sort; but if that aggregation be maintained, those interested in it should be called upon to provide against its dangers and evils, or at least to promote actively the measures necessary to avert them. One of these evils is the long-continued congestion of unemployed labourers, on occasions of manufacturing depression. Early training and education, and the development of the intelligence and capacities for ready changes of employment, is one means of reducing these congestions.

Inconveniences and Dangers of Uneducated Populations in periods of Distress.

§ 14. Few who have not had experience in the administration of relief to the destitute in periods of wide distress, can be fully sensible of the difference in amount of trouble and chargeability to the ratepayers, between educated and intelligent, and uneducated and unintelligent, people of the wage class—the heavy lumpishness of the uneducated, their abject prostration, their liability to misconception, and to wild passion, their frequent moroseness and intractability, and the difficulty of teaching them, as compared with the

self help of the better educated, who can write and inquire for themselves, and find out for themselves new outlets and sources of productive employment which no one else can find out for them, and who can read for themselves, and act upon written or printed instructions. The really well-trained, educated, and intelligent, are the best to bear distress; they are the last to come upon charitable relief lists, and the first to leave them. They are most easily helped. I remember when we promoted the migration of the surplus southern agricultural labourers to the north, that there were villagers in places who had heard of America and were willing to go there, but had not heard of Lancashire, and could not be got to move there even on the promise of largely increased wages, until they had sent one of their own people to see what sort of people they were in Lancashire, and return and inform them. The uneducated workmen in Lancashire are more intelligent, but, if we are to believe a story told of some of them, they have been led to America by a recruiting song, the chorus of which was—

> "And we will drink at every ale-house that we do come nigh,
> Until that we get to the North Ameriki."

§ 15. Instead of being kept crowded, as the adult workers recently were, in schools, to remedy the gross defects of elementary education, to teach them reading, and to keep them from hanging about the streets exposed to disorder, they would, if they had already been properly educated, have been abroad seeking occupations for themselves, for which their elementary education might qualify them. On a former occasion some got engaged in the police force, for which reading and writing are necessary. One operative who could read and write well, left his fustian jacket at home, put on his best Sunday clothes, and went about to inquire for a shopman's place or a clerk's place, which he succeeded in getting and did well in. A great deal of the good conduct of the operatives has been owing to the extent, which elementary education in and the partial application of the factory half-schooltime system, has leavened the mass of workpeople; difficulties and disturbances have arisen entirely with the ill-educated.

§ 16. When I talk of education, I presume an acquaintance with the different sorts of it, from the positively worthless to the better qualities in which the results, practical, moral, and physical, in combination with proper training, are proved to be most satisfactory:— from the inferior education in which, I have elsewhere shown, not one in three turn out well, to the superior training, in which there are not more than 2 per cent. of failures. The general and complete compulsory application of the half-time principle of school teaching by good teachers, combined with early physical training, may be

urged as a means of obviating future prolonged chargeability, from manufacturing changes and reverses such as those of the past. I add physical training, because to enable a manual labourer to turn his hand to anything easily, he should be early trained physically to turn his fingers as well as his hands to any work. The future of the wage classes will lie in large manufacturing processes, in which there must be action in concert; for this the military drill has great value, by imparting habits of order, prompt attention, and exact obedience to command. Systematised physical training imparts aptitude for every sort of manual occupation. It is now proved that by it, three persons may be fitted to be as effective in ordinary labour as five who are untrained; an economy of force which is of peculiar importance in itself, most especially to these districts, to meet an impending serious scarcity of labour.

How Congestions of Labour are reducible.

§ 17. Another course for the prompt and salutary reduction of congestions of labour is the removal of such barriers to the circulation of labour, as those created by the law and practice of apprenticeship, in its arbitrary requirement of a seven years' bondage—for it is a slave labour condition, that is, labour without immediate interest in the work, and at the command of another—inducing slavish and slow habits of work, in prolonging for years the learning of processes which might be learned in a few months. Of the benefits of the abolition of any fixed or arbitrary contracts of apprenticeship, the cotton manufacture is an example. The first Sir Robert Peel rendered an important indirect service to the cotton manufacture by freeing it from the clog of apprenticeship. The first manufacturers provided themselves with children from the parishes, many of them from the metropolis. Their labour being of the quality of slave labour, *i.e.*, labour without a sufficiently direct interest in the result—coercion by the whip, as might then legally be used, was resorted to, and great cruelties were committed. To prevent these cruelties he got an Act passed to regulate the labour of young persons engaged as apprentices in factories. To avoid the inconveniences of these regulations, manufacturers ceased to take apprentices, and found out that they could get children taught their work in months, or even in weeks, and that they did far better by the direct employment of young persons for wages at piece work immediately proportioned to their increasing skill, than had been done under the system of the old seven years' apprenticeship. It is scarcely conceivable how the manufacture could now be carried on under such an extent of slave labour conditions as the seven years' apprenticeship imposes. The effect of it must have been to increase the price of production, to diminish consumption, and to lower wages. Freedom to enter occupations is as important

as freedom to leave them, for the relief of stagnant and overburthened labour markets. There is now the less pretext for the maintenance of the barriers of long periods of apprenticeship in manufacturing processes, that the increasing subdivision of mechanical and all other sorts of occupations greatly reduces the time required for teaching or learning them. In the old and primitive conditions of the trade of a carpenter, when the carpenter was called upon to work upon the widest range of objects, from the making of a gate post to the construction of a geometrical staircase, there was a specious ground for requiring a long period for qualifying him for admission to the guild or the craft and mystery of the trade. But now, when a man is often employed in a large town for his whole life, in nothing else but making one sort of object, a door or a window, or flooring boards—and those now by machinery—there is not even seeming justification for the maintenance of the barbarous trades' union protectionism, and barriers to the free circulation of labour. These barriers, for the keeping out of in-comers, keep in those who would be out-goers; and keep them in as redundant hands who have to be maintained out of the trade funds; and hence wages are really, though not nominally, reduced. Instances of the best real progress in wages may be cited from branches of service which are the most free from such a bond, especially in the highest waged districts of North America. I have had, heretofore, enough to do officially with parish apprenticeships in poor law administration, to be aware that such contracts of service are generally as injurious in practice as they are vicious in principle. Next to free trade in commodities, perfect free trade in service is of importance to the masses and to the prosperity of the country.

Freedom of Changes in Employment.

§ 18. Formerly, as well as recently, foreign manufacturing populations have been subjected to calamities as severe as that to which the operatives of our cotton manufacture have recently been subjected. One instance is so important, that I must refer to it. In this country, on the occurrence of the cotton famine, the chief instructional resource was to send the uneducated adult males into schools for book instruction; afterwards, at the suggestion of Mr. Rawlinson, the sanitary engineer, they were taught the use of the spade and set to work on town drainage and other improvements, in which they have proved themselves most apt scholars. In some three months they have not only become good field drainers, but good town drainers, and have learned good artisans' work, and entitled themselves to fair artisans' wages.*

* The fact may, by the way, be commended to the notice of his Royal Highness the Commander-in-Chief, and to the present Secretary of War, on the question of the beneficial occupation of soldiers in time of peace.

§ 19. In Flanders, the industry of 250,000 hand-loom weavers and hand spinners was absolutely destroyed by the competition, chiefly of the English power-looms and machine spinning in 1846. At the same time the potato disease destroyed their chief food. The Belgian Government then, at the instance of the Prime Minister, M. Rogier, and with the concurrence of the local authorities, boldly set up schools throughout the country for teaching them new textile processes, embroidery, open muslin work, glove making, artificial flower making, and various new textile arts in silk, linen, and in cotton, and succeeded completely. Workmasters were collected for teaching the new occupations, which, by means of such instruction, were profitably, firmly, and permanently implanted in several cities. The Government did not undertake to manufacture on its own account, and undertook only to aid with loans of capital, and left the rest to contractors, giving only by its officers a general superintendence over the action of the new institution. Elementary book instruction was given on our half-time principle (except that the book instruction, instead of occupying three hours, was accomplished in two hours a-day), in the same buildings as the industrial instruction. This combination of mental and bodily, or industrial instruction, was highly prized. When the great body of the displaced workpeople had by this course of industrial teaching been replaced with productive occupations, and the crisis was over, the Government was disposed to regard these industrial schools as temporary, and to discontinue them; but there was so strong and general a local opposition to their discontinuance, in eighty-two or three out of eighty-five communes, that the Government has been compelled to continue them as permanent institutions, not at present for introducing new occupations, but for teaching old ones; and training neglected children of the ragged school class into habits of productive industry. The teaching of the trades, or of the arts, by trained teachers, is far superior to the teaching on the old method of apprenticeship by the master, who is otherwise occupied, and is commonly deficient in teaching skill, and does not know the principles of his art himself. The teaching, besides being better and cheaper, is vastly quicker in combination with the short-time book instruction. I am informed by M. Gare, the Belgian Government Inspector, that the average expense of the instruction given does not exceed 50 frs. or 2*l.* per scholar; the period varies of course with the occupation, from a few weeks to a few months. He finds that to make a complete workman, reading, writing, and arithmetic are necessary. In the schools of industry as now carried on, a large proportion of the instruction is in the arts of design. The experience of the teaching elementary drawing in the half-time schools in England, where it has been introduced, is that as an instruction to the hand and eye, and an adapta-

tion to manual work of all sorts, it is next in importance to teaching writing. The expense of imparting this industrial qualification does not exceed 1*l.* per head. Important examples of relief by change of the occupation, have been presented, though late and less systematically, in the case of the unemployed ribbon weavers of Coventry, where, I am informed by the mayor, many of them have gone to alpaca weaving, elastic web weaving, and other new kinds of manufactures. If the unemployed gain new permanent employment better than their old one, it is, of course, better for them; but it is also better for the public at large. If, however, they return to their old employment, as many in the cotton districts may be expected to do, and by which under conditions to which I shall hereafter advert, most of them will do better for themselves than by emigration; the congestion of labour will have been most healthily relieved for the public. To the extent to which new hands are required for the renewal of old work, opportunities will be given for the application of improved physical and mental training; of the powers and advantages of which, those interested in these districts have yet to make themselves acquainted. Stagnation of labour and service, congestion of labour, idle waiting, pauperism—is disease. The ready conversion and quick circulation of labour, is a healthy condition of the body politic, which it is requisite to sustain actively.

§ 20. It is not my purpose to enter on the subject of the administration of poor law relief, nor into the contraventions of sound principles of administration which have occurred. I will confine myself to the passing observation, that the common policy of employers in keeping together stocks of hands unemployed, or only in makeshift and unremunerative occupations for long periods of time, generally proves as erroneous on the part of the employers themselves, as it is unjustifiable as respects the ratepayers of other classes, at whose expense it is done. My immediate object is to direct attention to measures which are preventive of the need of poor law or charitable relief.

Reductions in the Cost of the Distribution of Food.

§ 21. Whilst great strides have been made in reducing the cost of manufacturing production, comparatively slow progress has been made in the cost of distribution, either of manufacturing products or of goods. The interests of producers are stronger than they have yet been aware of, in reducing the cost of distribution to the lowest; as extending consumption, as increasing demand—and with it wages as well as profits—and steadying both. I have not time to advert to the effects of the high cost of the retail distribution of the textile fabrics. But of late there have been reductions in the cost of the distribution of foods, some of the most important, by the wage

classes themselves, which are fraught with important lessons into the practicability and advantage of avoiding the credit system of purchases. It was found that the expense of the retail distribution of flour to domestic consumers was very great; and at Rochdale, and other places, co-operative associations—which were, in fact, joint-stock companies,*—were formed to reduce that expense. By getting at once a large body of consumers for ready money, and by reducing establishment charges, they did, in fact, reduce the cost from some 25 to about 5 per cent. to the consumers. The effect of setting up one co-operative store in Leeds, was to dispense with the services and the expense of some forty sets of retail distributors, or to occasion the shutting up of some forty small retail shops, with forty separate rents, rates, and taxes, and credits, by economising and concentrating the labour of distribution in one, and that one for ready money payments. At Halifax 5,000 shareholders or customers have been got together, as we are told, by one association. In Glasgow and Manchester, and elsewhere, manufacturers, by individual enterprise, have effected the distribution of food to the wage classes, ready cooked, in the establishments well known as workmen's dining-rooms, in which 500 or 1,000 workpeople dine daily at one establishment; who, I was told, at Manchester, had previously been accustomed to dine at small dining-rooms, where not more than twenty or thirty dined at each place daily. In this instance, as in the case of the co-operative distribution of the uncooked food, the saving was in the reduction of the expenses of the numerous separate small dining establishments by one large one.† Several

* The new cotton factories which have been called co-operative, and which, under that name, have brought together large number of shareholders of the wage classes, are all now in reality common joint-stock companies, with limited liability. The so-called co-operative shareholders in the leading establishments, decided by large majorities, that the workers should only be paid wages in the ordinary manner, and should not divide profits. The wages being for piece work, it was held that the payment was in accordance with communistic principle, "each "according to his capacity, each according to his work." The common spinner had had no share in the work of the general direction, nor had he evinced any of the capacity of thrift or foresight of the capitalist, and why should he share profits as if he had? The wage class, in their capacity of shareholders, decided that it was an unjust claim upon their profits, and kept them undivided to themselves.

† The first observation naturally made upon the statement of these results is, But what will become of the displaced small shopkeeper? to which my answer is, that the like results are to be anticipated, as those which have followed improvements in machinery. Labour saved, is to be taken as equivalent to capital created, and thence an increased demand for labour. The whole history of Lancashire during the last half century, has been one of the extension of labour-saving machines, and, at the same time, of a demand for labour, with a continued augmentation of the population, and an augmentation of the rates of wages. It once certainly appeared to me *à priori*, that some very special provision of poor law relief ought to be made for those able-bodied men whose labour had been superseded, and who had been thrown out of work by the introduction of new

individual manufacturers, however, have munificently fed their own workpeople on food purchased for cash, at wholesale prices. From some accounts of the cost of the food so purchased, as also of the previous usual expenditure of the same workpeople, the following most important results, displaying the operation of their improvident credit system, were manifested, namely:—that a given amount of money spent, 1st, as the wage classes are accustomed to spend it, by purchases on credit at small retail shops, will produce one and a-half day's subsistence; 2ndly, spent at retail shops for ready money, the same amount will produce two days' subsistence; 3rdly, spent on food purchased wholesale for cash, it will produce nearly three days' subsistence. The prime cost of the 4-lb. loaf baked on a large scale was 4*d.*, at the time the wage classes were charged 7*d.* and 7½*d.* for the 4-lb. loaf at the shops; but the loaf produced wholesale was, from its better quality, worth at the least a halfpenny more, and so with the other foods. I have no doubt, speaking generally, that, by improvements in saving labour, and losses from the credit system in distribution, full two and a-half days' subsistence may be obtained, at the expense which now gives only one and a-half day's food for the same money. Strong labouring men who take the whole of their food, breakfast, dinner, and tea, or supper there, get as much as satisfies them for 7½*d.* a-day on the average. Call it 5*s.* a-week, for a minimum of food for a bare subsistence, or nearly double the amount reported to be expended by agricultural labourers, and in some public institutions where a high degree of health and strength is maintained, the cost is much less. Add to this, 2*s.* for lodging and 2*s.* for washing and clothes, or say 10*s.* a-week for the bare necessities, and hence we find that by improvements in distribution, how much wider a margin is gained than heretofore, for extra comforts and reserves for insurance, to a factory labourer, who earns 18*s.*, 20*s.*, or 25*s.* or more a-week.

Improvidence and Waste by Uneducated Workpeople.

§ 22. The wage classes of the cotton manufacture have, it is said, borne their privations nobly, and I would be far from detracting from their praise; for I well know to how many unfavourable circumstances they have been subjected. But it must be said, that if all of them had done what some of them have done; if most of them had not, by neglect, been deprived of the benefits of an education and training of a proper quality, suitable to females as

machinery. Anticipating disastrous results to classes of men, I made inquiry as to the effects of some large displacements of labour, by such means. I found, that after a little time, the people displaced were, as a *class*, with fewer individual exceptions than could have been anticipated, as well off as before, or even better; and that, as related to such *classes*, the best course was to do nothing.

well as to males; and if our recommendations, and the provisions of the Factory Act, had been duly complied with, they would have had far less of those privations to bear at the expense of others as well as of themselves. In some of the largest of the schools specially established for the instruction of the unemployed workpeople, it was found that more than 75 per cent. of them were unable to read. Not having the faculty to make the most simple calculation, wages and the domestic means are wasted by the credit system; 80 per cent. of these females were found to have no knowledge of any sewing, such as is taught in elementary schools. Some of them "When they first took a needle into their hands, pushed it through "their work by pressing it upon the table." "I," says Mr. Redgrave, "saw a mother—who, until she attended a sewing class, never "used a needle—making a frock for her sixth child." Having no knowledge how to mend clothes, they and their children were in rags. Families trooped into the relief rooms in the most abject condition, whose previous aggregate wages exceeded the income of many curates, as had many of the individual workmen. On the occurrence of absolute destitution, it is the rule of the new poor law, as well as of common humanity, to regard solely the fact of the destitution, without reference to its cause, for the purpose of relief. But it is now proper to look to the past for the sake of the future, and ask whether serious perturbations of the trade shall entail the like destitution and misery and chargeability *ab extra* for its relief, however high above the average of other districts the future wages may be. It is to be borne in mind, that the past wages have been at the least one-third higher than in the rural districts, and that the average age of death of the operatives in the manufacturing districts, is fully one-third lower. The estimated wages of the 440,000 cotton operatives being in the aggregate 11½ millions,—the reserves might on the standard of agricultural expenditure have been, for one year, for the cotton workers alone, or from year to year, double the amount raised by external charity; nearly as much as the four millions of the deposits of the county savings banks for many years up to the present time, when they amount only to 31*s.*, whilst in the county of Devon, they are 60*s.* per head of the population. The investments in building clubs and in other directions are no doubt greater in Lancashire, but so far as appears, not commensurate with the difference of the wages in the two districts. One source of the difference is the manifest difference in the rates of expenditure for drinks, and the statistics of drunkenness point to this as a source of the evil against which it behoves all social economists to lend their best exertions, namely, the conditions in which high wages mean only excess in drink. It must be said that in the last famine year there was in Rochdale, Preston, and some other places, a reduction of the

evil; but that in Manchester, and other places, there was an increase of it; that in the famine year nearly 28,000 persons were proceeded against in the whole county for being drunk and disorderly, and that the proportion of offenders was more than double the number of all England and Wales, and five times the number of the county of Devon.* Crime of all sorts follows excess in drinking, and in Lancashire it bears the same relation to the crime in Devonshire as it does to its drunkenness. Educationists regret that the persons of the wage class who give the best attention to the education of their children, and who pay for their schooling the most regularly, are not those of the highest, but those of a medium amount of wages. I have been informed of one man in the vicinity of Manchester, a retailer of coals, who refused to give credit to any man who earned more than 24*s.* per week, because he found from experience that if he did so, he never got paid.

Waste from Intemperance, how Checked.

§ 23. One example of the abatement of the great evil, presented by the report of M. Reybaud to the Academy of Moral and Political Sciences in the Institute of France, appears to me to be so important, that it was a strong motive to me to accept the honour of the position now entrusted to me, that I might have an opportunity of calling public attention to it in England.

"For the first time in my travels," says M. Reybaud, "in the town of Sedan, which is an ancient seat of woollen manufacture, I have met with a working population from which habitual drunkenness has been expelled. The chief honour of this achievement is due to the head manufacturers. By an agreement amongst themselves, which ought to be held forth as an example to others in their position, they have shut the doors of their establishments against all workmen given to excess in drink, or who by open and notorious drunkenness signalised themselves for that exclusion. The fight with the vice has been long, and possibly with another population the victory might not have been with sobriety. But at Sedan there has been a complete success. Beginning with the least hardened of the drunkards, it has ended by reforming or shutting out the most obdurate of them. Towards those workmen who, with the best intentions to mend, now and then gave way, some indulgence was at first extended. They were allowed the benefit of continued amendment, and provided it was notorious that there was amendment, and that their offences became less serious as well as less frequent, their presence in the workshops was tolerated; the conditions of their employment being that they made a sincere confession, or that the wife, the party most deeply interested, came and

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* These returns do not distinguish the occupations of the offenders, and there is no reason for believing that they belong peculiarly to the cotton workers. Mr. Arthur Arnold, in his history of the cotton famine, referring to the extraordinary rise in health of the unemployed, observes, "It was well said by the "sexton of one of the most important towns in Lancashire, when asked how it "happened that his lugubrious trade was unusually inactive during the summer of "the present year. 'Well thae sees,' he answered, 'poverty seldom dees. There's "'far more kilt wi' o'er heytin and o'er drinkin', nor there is wi' bein' pinched'— "a truth which contains a moral lesson valuable to all classes."

asked pardon for her husband's offence. Amongst other examples of the sort of conflicts which arose, I received the following—that of Father Joseph. Father Joseph was a fuller, an old workman above sixty when this revolution took place. It attacked him in his most deep-rooted habits and tastes. Working with his feet in water all day, continually wet in the process, he had contracted a horror of water, and at night, when his work was done, he withstood its effects by what he considered the most powerful antidotes. He was an excellent workman, who had many good qualities to set against his one default, for he preferred to drink at home rather than at the cabaret, and at night, when his children were in bed or away, to avoid as much as possible setting them a bad example. His employer took pity on him. To discharge him after his long services seemed an act of barbarity. Nevertheless an agreement had been made by all the manufacturers which must be kept to, which allowed of no exception. The employer sent for the old workman and paid him his wages. Joseph took high ground, declared that this was an attack upon his liberty, that he would sooner be discharged from his work than have his drink interfered with, and that he would take a double quantity that very night to vindicate his independence. After the first storm of anger, reflection and a calm ensued. The word of Father Joseph was as good as his deed. After long objections and debates, and with deep sighs on his part, the employer got him to agree that, for one whole year to begin with, he would only get drunk on Sundays and saint's days. The workman reserved to himself the right to drink as he pleased on those days, and it is to be feared that it did please him to take extra doses to compensate himself for his privations during the rest of the week. The year passed, and Joseph had again to appear before his employer, to meet a fresh attack upon his habits. Now, the condition was to be, that for the next year he was only free to get drunk one Sunday in the month. There was a renewed rebellion, renewed debates, followed by renewed submission. The second year passed, and the fatal term for the entire discontinuance of the habit arrived. It was now put to him that he must cease to get drunk entirely, or cease to work at his old shop. The remembrance remains of the valiant resistance made by Father Joseph when driven to this last ditch. It was, he said, an attack upon his health; they would deprive him of a tonic, and prevent him taking that care of himself which only a man could take who knew his own temperament. Good workman as he was, notwithstanding his age, he was becoming one of the softest in the shop. No one would gain by that, his employers any more than he. Why not let him continue to live as he had lived? As his work did not suffer from it, why mind an occasional whip up? The habit was reduced to the fairest limits, and he positively had nothing more to concede to these exactions—and so on. During an hour's discussion, Joseph held his ground determinately against the most benevolent persuasions. Then his resistance slackened, and he was about giving way, when a scruple of conscience seized him. Each trade in those districts had its own patron saint, and the woollen workers have perhaps the most accommodating on the calendar. At the decisive moment an idea occurred to Joseph, who set up a cry of distress and of determined resistance. "Why, you will at least leave me the annual festival of my patron saint?" he exclaimed resolutely to his employers. The employer in his turn gave way, and to secure a complete conversion, the privilege of the annual saint's day was finally yielded to Joseph.

"I cite this anecdote," says M. Reybaud, "because it well displays the manners of the country,—on the side of the workmen a fidelity to their engagements, even where the acts elude control; an open defence of what they do, instead of underhand evasions; an honest maintenance of what might easily pervert the conscience;—on the side of the masters, firmness tempered by indulgence, a determination to abide by an agreement amongst themselves, to do what was good for the workmen with or without their consent; to protect them and their families against vices by which the manual labour of the workshop is not visibly or seriously affected.

"To be convinced of the great results obtained however by the course taken by the employers, it is only necessary to pass in the evening through those parts of

Sedan which are thronged by workpeople. You now hear no disturbances, no outcries; you see no drunkenness, except it be amongst the soldiers of the garrison, and you see no open shameless prostitutes. The few cabarets that you meet with, are without the glaring exterior displays and provocatives which you may observe in such places elsewhere. They are modest, and seem even careful not to attract attention. Their customers glide in and do not display themselves in front, and the doors, which are carefully shut, conceal what goes on within. If there be debauchery—and there is yet everywhere—it is no longer scandalous and offensive to the public eye. To display it would be to expose it to denunciation as against the rule of the workshop. With all this, there is nothing which has the aspect of constraint; the state of things is conformable to the predominant social sentiment. Temperance has entered into the tastes and habits of the population, and owing to the benefit experienced from it, prevails without constant effort. The wives of the workmen have not been indeed backward in giving support to the movement which so directly affected them, for it put into their hands an arm and a power which they did not neglect to use; for they had much to gain by it—domestic comfort, a less stormy household, better examples for their children, in a word—a home freed from a train of brutalising influences. Hence the exterior tranquillity of the town corresponds with the domestic calm, of which it was but the sign and the fruit. Without the services of a single extra policeman, solely by the effect of more sober habits, the streets of these lower quarters are freed from habitual disorder. The altercations, the assaults, the fights, the crimes which drunkenness multiplies have disappeared amidst the applause of the city and the home. "I urge this," he says, "as a great example which bears upon the source of the greatest calamities to which our workpeople are subject, but which, while it is everywhere deplored, has hitherto been nowhere seriously combated by the influential classes above them. Nearly always, when action against it is thought of, recourse is had to the law for means of repression by punishment, or by an authoritative police surveillance over the sources of disorder. Nothing is more convenient, but at the same time more ineffectual. It is only by individual effort, wisely and firmly directed, that the evil can be abated, as much as it appears to me to be possible to abate it. Here is a city where the leaders of industry have, by a rare exception, brought themselves to understand each other and act in common; to forget for the time the trade interests by which they are divided, for the sake of a superior interest, a real reform of the vicious habits of the population, on which they have been united. Drunkenness is forbidden, drunkards are excluded from all the great workshops. Why cannot the manufacturers in other cities follow the example? Why cannot they undertake a campaign against habitual drunkenness, such as that which has succeeded at Sedan?

"It is a distinction for Sedan to have acted, while other manufacturing cities have done nothing against the evil. But all that has been done for morals, has not been without profit to the manufacturers; it is well to say to those who are so absorbed by a seemingly direct and manifest money interest, that the workmen who have become more temperate, have become more punctual and trustworthy too, and the moral victory has proved to be a good money calculation."

Depressing Effect of Inferior Habitations to be Remedied.

§ 24. The courses of action above described are of great importance, for the repression of excess in habits already formed in adult workmen, but other tried measures are also available for the prevention of such habits in the rising generation of workmen who will be in demand for the new labour, and to take the place of the adults who are going. Many of the old mills with old machinery that are now shut up, will not, I am told, be opened again; new mills with new machinery will be opened in their place. They will, therefore,

afford opportunities for better economic and social starts, which it is important to consider. The workpeople in existing manufactories may be described as industrial regiments; but the larger manufactories demanded by manufacturing and mining will require workpeople in numbers equal to divisions of large armies, of which the leaders of the industry are generals, and the partners or overlookers colonels and officers. One company of machine workers at Oldham has 4,000 men and boys, amongst whom it is stated that 5,000*l.* a-week in wages are usually divided.

§ 25. For the old cotton factories, the workpeople have been brought upon towns, much as regiments would be brought there, if they were without any provision of quarters, and if every soldier was left to provide for himself, anywhere and anyhow; with only the condition of making his appearance at the roll-call. Men, women, and children, are brought together without any due provision of proper homes or schools. These industrial regiments and brigades have been led into overcrowded fever nests, and then told to find medical service how they can, for the alleviation of disease and suffering. At the outset of the cotton and other manufactures, those who began them were generally poor, often themselves of the wage classes, and had quite enough to do to raise capital for their works and to keep them going. They got workpeople together how they could. How they were huddled together, in what dwellings, how the wages were spent or mis-spent, was of no more concern to the employer than it usually is to any purchaser how the tradesman disposes of his profits on the sale of his goods. There was little perception of the evils of such disorderly aggregations, little time on the part of the employers to think of them, or skill or capital to apply for their prevention; and there being no public administrative care or responsibility for the protection of the popular interests, or the general public interests, in the health and morality of the population, the deleterious conditions thus commenced have been continued from reckless habits. The operative must live near his work, in any dwelling that he can get, and if that, which he gets, is ill-drained or cesspool-tainted, he must take it and sleep in it with his family, for he can get no other. If it be without proper supplies of water laid on, his wife or he, who have been at work all day, have no time to fetch any, and they get the nearest and the scantiest supply they can, and they and their children go unwashed. Hence commonly the workshop is crowded with habitually unwashed fœtid people, often in ill-ventilated rooms. To work in such atmospheres and sleep in such conditions—the whole family being often huddled together in one sleeping room—is exhaustive to the nervous system, and the exhaustion is provocative to the use of drinks and stimulants. I once remonstrated with an apparently sensible workman, on the

expenditure of half his income in whiskey; his reply was—"Do "you, sir, come and live here, and you will drink whiskey too." There are few, indeed, who would not, who consented to go into such places. Such conditions which provoke excess in drinks on the part of the labouring classes, are commonly overlooked, as also the need of the removal of conditions for the prevention of such habits. I know that the same classes when living and working in purer air, drink less.

§ 26. The effects of those conditions are indeed shown on all occasions by a rise in the health of those who are in the open air when out of work. Children are reared in these conditions, and if there were good schools near the place of work or the habitations, they were of no use to the workers, for the children, when of an age to go to them, were required to help and supply the deficiency of wages occasioned by drink. To protect the rising generation from this exclusion from education, and from bodily deterioration by overwork, the compulsory provision of three hours' schooling a-day, or the half-schooltime system, was proposed by myself and my colleagues, and is now at length assented to as a principle, though yet defectively carried out in practice. The condition of manufacturing service, of entire devotion to individual work, and of exhaustion by it, excludes much attention by the individual to many of his personal wants, or to those of his family, and they must be seen to, or provided for, by some external and independent public authority, by some common or special provision, or they will not be provided at all.

Improvement in Habitations with Improvement in Manufactures.

§ 27. As it would be with soldiers in a garrison, the aggregation of people in factories without due provisions outside the factory, is productive of irregular and inferior service, and frequent unintelligent action within the factory. As, however, manufactures on a larger scale have become more settled and systematised, and the consumption of goods more regular, and as capital has accumulated, many better educated and more liberal capitalists, with leisure to look beyond the walls of their manufactories, have introduced various improvements in the condition of their workpeople; some by providing better houses for them, others by providing improved schools for their children; and they have generally found that the improved external conditions, by bringing and keeping a more respectable class of people about them, have been attended by improved internal service in the manufactory. One great firm pays most sedulous attention to its own half-time schools, and will not, if it can possibly avoid, engage any one, even for superior positions, in its service, who has not gone through those schools. Whether it be single capitalists,

or associated capitalists, in companies, co-operative or other, who will have to seek, and probably to compete for, new hands to meet the coming demands for the increased production of manufactured goods, it may be urged upon them that they would themselves do well to make more matured provision for a class of workpeople qualified for the better application than heretofore of the same wages, or of the improved wages which it will probably be necessary to give.

§ 28. Sanitary science and economical science will now enable them to invite new comers by saying to them, "If you join us, you "may rely upon having fellow workers of respectable conditions, "and of being protected from the annoyance of association with "habitual drunkards, or with persons of disreputable conduct, for "we permit none such to remain with us. Our place of work is "warmed and ventilated on the best principle, and provision is made "for the personal cleanliness and comfort of our workpeople. You "will have a convenient self-contained house for your wife and "family, well-drained and ventilated, and provided with pure water, "as also with warm water laid on from the condensing water of our "works, for baths and for washing, with a garden plot attached to it. "Our workpeople have a co-operative store of their own, in which "you may obtain wholesome food at wholesale prices, by which you "will save 20 per cent. on your expenditure for food. Your children "will have the advantage of a school under good teachers for "physical as well as mental training, on the half-schooltime prin-"ciple. We have engaged for the protection of the health and "working strength of our people, the services of a medical officer of "health, less to cure than to prevent disease, by seeing to the "removal of its causes. If you attend to his suggestions, for your-"self and family, whilst using our working and living rooms, you "may reduce your sickness and insurance charges more than one-"half, and extend the period of your working ability more than ten "years beyond the periods obtained in other places. This will "enable you, under Mr. Gladstone's Annuity Act, by increased "savings, to obtain a deferred annuity, that will give you easy and "respectable independence when you are past work. In the ordi-"nary conditions elsewhere, your doom, a premature death, after a "wretched life, is certain. In the common conditions, in ill-drained, "ill-conditioned, cesspool-tainted houses, without proper supplies of "water, for which you will have to pay higher rents in low neigh-"bourhoods, half your children will be in their graves soon after "their fifth year, as you may see by the registrar's returns, all work-"men's children are in Manchester, in Glasgow, and elsewhere. "But here your wife may rear them all, and educate and train them "all well; and you may enjoy with her and them the comforts of a

" cheerful home, to the comforts of which, each child as it grows up " may, by duly moderated and salutary labour, contribute." All this the enlightened leader of industry may promise and do, for we may show where one or other portion of the promise is fully performed by the most prosperous firms.

§ 29. Much of this has indeed been done by public means. Where Lord Shaftesbury's Act for the regulation of the lodgings for tramps, or for nightly lodgers has been properly executed, those places have been kept clear of a great part of the diseases which ravage the inmates of the weekly tenements occupied by the wage classes. Instances may be given of the reduction to one-half of the sickness and death-rates prevalent amongst them by house drainage works alone. Mr. Heywood, the Secretary of the Cotton Supply Association, has estimated, by a division of the margin of wages and profits in 1860, that the sum of 80*l.* would be lost to the trade for every working hand that emigrated. It may be objected that if they were returned in such pauper conditions, as many of them have been, the present value of such hands would soon disappear by the deterioration of the quality of the labour. My estimate was higher of the loss incurred for every working hand prematurely lost, as the average loss is ten years at the least of working ability by premature deaths from preventible causes. Twenty years ago Dr. Lyon Playfair, after examining Lancashire under the Commission of Inquiry into the Health of Towns, concurred with me in the conclusion that at least 14,000 premature lives were sacrificed under preventible conditions in the cotton manufacturing districts, of whom 11,000 were lost in stages of working ability; and that a loss was thereby incurred of not less than four millions annually; a loss exceeding that apprehended in manufacturing interests by emigration. Calamity has certainly been the means of gaining an extent of attention to these means of physical improvement, which the most complete economical expositions hitherto have failed to do. If the million and three quarters of money lent by Parliament for the employment of the unemployed cotton operatives should be wisely expended in putting the habitations of the workers in a proper sanitary condition, and if the experience of the results of proper works should lead to their general application to all places in the manufacturing districts where such works are needed; if the habitations be put in a condition as homes befitting a better trained and educated population; and if the better training and education of the in-comers be provided by the due application of half-time physical and mental training, then this late and large distress will be attended by adequate compensation in social and moral, as well as in material improvement; and if the principles of economical and social science which I have indicated in their relation with the means of intellectual, moral, and physical

improvement, be duly regarded and applied, the conditions of the manufacturing population, instead of being deplorable, will, with the increased and increasing wages derivable by the people from the extraordinary improvements in the mechanical arts for which they are required as ministers and the servants, be brought up to a high state of moral and social advancement.*

Agricultural Economy.

§ 30. In parting for the present with the great topic of manufacturing economy, I have to state that we have this year made an opening for the consideration of agricultural economy. Agricultural associations generally confine themselves to the discussions of questions of progress in agricultural art. The discussion of questions of agricultural economy appears to be deemed out of place there; even the education of agricultural labourers, which is so important to the progress of agricultural art itself, is little entertained by them. But here, the general survey of the whole field of labour and production will be deficient, if the great agricultural portion, from which manufactures draw so largely, be passed without examination or notice. The same economical principles pervade the entire fields, though under varied conditions, which it will be advantageous to both to observe. Extensive land agents and successful land improvers who are conversant with manufacturing economy, are wont to express their wish that land should be taken in hand by men of manufacturing habits, which include the economical principles applied in manufactures.

Principles of Manufacturing Progress applicable to Agricultural Progress.

§ 31. It has been confidently declared to me by practical men, that the application of the like principles would be eventually attended by the like wages and profits in agriculture as in manufactures, and I believe it may be made evident that they would. In examining the general condition of agriculture, we cannot fail to be struck with its comparatively slow rate of progress. The principles of the subsoil drainage of land, for example, have been demonstrated in practice for more than a quarter of a century; and I know, from official sources, that under all varieties of rude and imperfect work, such drainage repaid itself in from ten to four years—yet of the land requiring drainage, after all that has been said, not more than some fifteenth part has yet been drained. Five years may now be taken as the

* It was found that the further reading of the address would have delayed the business of the Sections, and it was therefore terminated at this point, and the part of the subsequent portion which relates to the application of the piece work principle, was read in the Agricultural Section.

average period of repayment for proper land drainage works. Manufacture economy would not linger long in availing itself of such results. In the course of some investigations, to get quickly at the knowledge of the places where drainage works were most neglected, I once asked a candle manufacturer in London from whence the greatest quantity of their rushes were got for rushlights. "From "Lancashire and Cheshire," was the answer. That is, from the vicinity of the great manufactures. In an agricultural report it was declared not long ago, that two-thirds of Cheshire was too wet to bear sheep. Land drainage ought indeed to be pointed out as a great field of most salutary and suitable work for the employment of the unemployed in the cotton districts. In the rural villages, old men and women, bent and withered with rheumatism from working in wet fields and living in damp cottages, are considered regular subjects for the exercise of artistic skill and sympathy. Let me cite a description I gave in 1842 of the conditions requiring the application of economic as well as sanitary principles:—

"Within many of the towns we find the houses and streets filthy, the air fœtid; disease—typhus, and other epidemics—rife amongst the population, bringing in their train destitution, and the need of pecuniary as well as medical relief; all mainly arising from the presence of the richest materials of production, the complete absence of which, would, in a great measure, restore health, avert the recurrence of disease, and, if properly applied, would promote abundance, cheapen food, and increase the demand for beneficial labour. Outside the afflicted districts, and at a short distance from them, as in the adjacent rural districts, we find the aspect of the country poor, and thinly clad with vegetation (except rushes and plants, favoured by a superabundance of moisture), the crops meagre, the labouring agricultural population afflicted with rheumatism and other maladies arising from damp and an excess of water, which, if removed, would relieve them from a cause of disease, and the land from an impediment to production, and if conveyed for the use of the town population, would give that population the element of which they stand in peculiar need as a means to relieve them from that which is their own cause of depression, and return it for use on other land as a means of the highest fertility. The fact of the existence of these evils, and that they are removable, is not more certain than that their removal would be attended by reductions of existing burdens, and might be rendered productive of general advantage, if due means, guided by science, and applied by properly qualified officers, be resorted to."

§ 32. The pressure of distress from the cotton famine will at length have gained attention to one portion of this topic, and, so far as the clearance of the towns is concerned, the advice of one properly qualified, Mr. Robert Rawlinson, has certainly at last in this year 1864, been resorted to in Lancashire. An outcry has recently been raised, founded upon official medical examination by Dr. Edward Smith, on the great need of milk for the use of the town population, and especially for children. In that same report of 1842, I stated, that with reference to the sewerage of London—which was then equivalent to that of all Lancashire—that taking the rate of production even from the wasteful method of applying the sewerage

of Edinburgh, by submersion, the refuse now thrown away, would serve to feed no less than 218,000 cows annually. If the more economical method of applying liquid manure, pointed out in the official minutes of information which I was enabled to prepare in 1851, and which were laid before Parliament in 1852, by which a quantity of water or liquid manure, equal to a heavy thunder shower, may be thrown on any sort of culture at a rate of 1*s.* an application per acre, and the formation of sewer marsh surfaces be avoided—a double production would be obtained. Added to the immense waste of the town manures, there is a general waste (an increasing number of model farms excepted), of all the liquid farmyard manures, as well as of two-thirds of the effect of all the solid farmyard manures (as demonstrated in the minutes to which I have referred), from their application in defective methods. This general waste of the farmyard manures has been estimated by good agriculturalists as equivalent in itself to another rental of the land.

§ 33. Such are the present common conditions of the field of agriculture, besides those of manufactures, for the application of economical principles. One of the available principles which I have not time to demonstrate at length, is that which I call of *in*tensive as compared with *ex*tensive production, of the heaviest amount of produce from high culture on narrow areas of land as against thin production from low culture on wide areas. M. Lecouteux corroborated this in his "Principes de la Culture Améliorante," that by applying different doses of manures in the proportion of nine, of fourteen, and of twenty—respectively to the same areas of land, the prime cost of raising a quarter of wheat was brought down from 40*s.* to 32*s.*, and from 32*s.* to 17*s.* per quarter, rent included. Now this reduction in price was gained by the adoption of the economical principle, the operation of which I have already described in manufactures, namely, of distributing the fixed establishment charges over the greatest amount of gross produce. Thus, if the acre which only produced twenty bushels hitherto, is made to produce forty, the double quantity will only have half the fixed charges upon it of rent, rates, roads, hedges, buildings, &c. But the greatest economical result to be looked forward to in agriculture, is in the increase in the "intelligent force" applied to it.

The Piece Work Principle in Agriculture.

§ 34. The striking advance of the cotton manufacture is, certainly, due mainly to the great bulk of the labour being on the piece work principle, and to the ease with which it is applied. Cotton manufactures could not, indeed, be worked as farms are, by day work. An instance has recently been mentioned to me of a family of agricultural labourers who had become mill workers, and, of course, trained

in piece work; but having been thrown out of employment during the late famine, had offered to, and had been engaged to do agricultural work, such as getting off crops, as piece work, at less than would have been paid for day work to attain the same object, and were believed to have paid themselves well. I have been informed of other instances of the same sort. Agricultural labourers also, who have joined gangs of navvies, and have been drilled with them into their energetic piece work habits, on returning to farm labour, will do their tasks of work in half the time of the common day labourers. Examples of the highest order of agricultural piece work, with increased wages, closely approaching to manufacturing wages, are presented in market garden culture, near the metropolis. In some of the northern agricultural districts, the agricultural labourer's wages are about one-third higher than those in the southern counties; but I have ascertained that their labour, too, is full one-third more efficient; in fact, that two of these northern labourers are equal to three of the south. There are great economical results derived from the saving of one capital, as we may economically designate a man, out of three, for the attainment of the same produce. The saving of the food, clothing, and lodging of one out of three, enables the produce to be divided between the two as extra wages, with some increase of profit to their employer. A great economical and social improvement would be consequent in emigration or migration, if farmers could be got to apply the piece work principle in each case of the departure of one labourer by saying to two others, "Now Brown is going, and I propose to put "you two, Jones and Robinson, chiefly on task work, and divide his "wages of 9*s*. a-week between you, if you will make it worth my "while by also dividing his work and doing it well between you." This, with the younger workers, would meet with a hearty response. The farmer might indeed commonly attain the result gained by manufacturers, in periods of distress, by saying to Jones and Robinson, "If I give you some extra wages, cannot you make it worth my "while to do without Brown?" This is a topic for a large economical exposition. Recently in France, at the model farm for the trial of sewage manure, at Voujours, near Paris, I had the advantage of a discussion upon it with the director of the farm, Professor Moll, the most eminent scientific agriculturalist perhaps in Europe, and also with Mr. Amerfoordt, the Mayor of Haarlem, who conducts the chief model farm in Holland. It was declared by Professor Moll that economical progress in agriculture was only practicable on the piece work principle. Mr. Amerfoordt concurred, and he gave me the following examples of payments for results, in addition to ordinary wages, which he assured me were working exceedingly well:—The steam-plough is introduced in the model farm, and over

and above the regular wages a certain extra payment is made for each hectare which is pronounced to be well ploughed; the payment being divided between the engineman and ploughman and boys in attendance. The horsekeeper, over and above his fixed wages, has a payment for each living foal got from a mare; the cowkeeper has an extra allowance for each living calf got; the shepherd an extra allowance for each lamb sold, or living six weeks after it is born; the poultry keeper an extra allowance upon each hundred eggs delivered to the housekeeper, and upon each cock or hen sold; and the dairy-maid an extra allowance for each lot of butter and cheese sold, without reasonable objection to its quality from the purchaser. On this particular farm the cereals are at once worked up into bread for sale. The baker on the establishment has a fixed wage allowance, for which, however, he must sell not less than a given quantity of bread. For all he sells above a given quantity, he has a percentage. Fines for irregularities, coming late, neglecting horses, are put into a common fund, which is every quarter divided amongst all the men, so that the punctual and diligent have an interest in looking after the laggards.

§ 35. In England a great obstacle to the application of the piece work principle, is the low state of the education of the farmers, a larger proportion of whom than might be supposed, being incapable of keeping accounts, or even of reading or writing. The principle of paying for results, has been applied to agriculture in Scotland in the payment of shepherds. In England there has, I am told, been a glimpse of the principle in one district, gained by game preservers, who find it to their interest to make it the interest of farmers to be preservers too, in paying them per covey of partridges preserved on their farms. This system, I am assured, works at Haarlem and elsewhere, as persons conversant with manufactures, would expect it to work. The heavy stolid agricultural action is replaced by a vivacious outlook and intelligence. The food manufacturer is saved the labour and distraction of superintendence and incessant fault finding for carelessness. With us the benighted law of partnership would prevent the baker and other servants being made responsible for losses as well as shares in the profit, making them partners, and rendering the employer liable in his whole property for the defaults of each. The amendment of this law would be of especial importance for the gentlemen farmers and land improvers, who cannot give that laborious attention to details, and to checking piece work, on which agricultural success mainly depends, and who must be dependent on farm bailiffs and stewards. The Association would render much service to agriculture, as well as to trade, by agitating to free it from such injurious restraints, and advance the great social and administrative problem of making interest coincident with duty.

The Demand for more Intelligent Labour in Agriculture.

§ 36. The increasing emigration to America from Ireland, and the continued flow to our colonies from England, and the demands from the general labour market in towns have begun to render labour scarce in agriculture in some districts, and under the pressure of inconvenience or distress from that scarcity, to extend the use of labour-saving machines. Steam-ploughing has fairly "turned the "corner of profit." The demand for "intelligent force" promises to be accompanied by larger demands for "intelligent directors of "force." Hitherto there has been as much successful labour-saving machinery unused in the agricultural districts, as there is of such machinery used, and mechanical force unused is unused from the want of intelligent directors of it. Even in manufactures intelligence is scarce and deficient for the direction of steam force. Mr. Fairbairn showed some time ago, that as much power was obtained from one pound of coal in Cornwall, where the working of the steam-engines is chiefly on the piece work principle, as in Manchester from five. Improvements have since been made, but the smoke is the outward and visible sign of wasteful work. An intelligent engineman will work a locomotive with half the coal used by one who is unintelligent. In one instance, where the enginemen were put upon piece work principle, that is, were paid for the amount of power they obtained out of a given quantity of coal, the reduction of the consumption of coal was from thirty down to seventeen. But, in general, employers are not at the pains to get registries or to attend to them. The application of the piece work principle would reduce the general consumption of coal enormously. Where the causes of steam-boiler explosions are ascertained, they are generally found to have been the result of unintelligent direction. Mr. Fairbairn has long urged the necessity of an augmentation of the intelligence, for the direction of force, by improved elementary instruction. If the want of intelligent direction for force be great for manufactures, it is still greater for agriculture. It is well known that steam-engines scarcely ever do the duty in the farmyard that they do in the yard of the maker. I have been informed by a firm which lets out steam-power for agriculture, that it is always conditional that they send men whom they know, and can make responsible for the working of their engines, for they cannot trust their engines in such hands as are at present to be got amongst farm servants.

§ 37. The economical principles which I have indicated as evolved by the progress of machinery in manufactures, may be expected to be attendant on the extended use of machinery in agriculture. On impartial examination, on economical grounds, it will, I conceive, be

found, that the fitting intelligence needed to be combined with productive manual force, as well as to direct mechanical force needed in agriculture as well as in manufactures, must be obtained by improved elementary instruction in the schoolroom, combined with the interest which stimulates intelligence on the half-schooltime principle in agriculture. Parents of the wage classes on the one side, and employers on the other, have to be informed that by proper training the value of the young, as intelligent force, may be augmented by at least one-fifth, and as "intelligent directors of force" by more than one-third. If sound economical principles be applied to labour and production in agriculture—principles which a sub-section may aid in developing and diffusing—there is fair reason for believing that we might more than supply the food for our increased population, and that with the increased production, wages as well as profits may, in agriculture, be made to follow close upon prosperous manufactures.

On the Commercial Progress *of the* Colonies *and* Dependencies *of the* United Kingdom. *By* E. T. Blakely, Esq. F.S.S., *of the Statistical Department, Board of Trade.*

[Read before the Statistical Society, November, 1864.]

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I.—*Introduction.*

The management of the colonial dependencies of Great Britain is undergoing a thorough and searching revision, and the policy which once held the colonies in dependence has taken another and widely different direction. The appointment of the committee, in 1860, on the subject of colonial military expenditure, indicated the state of public feeling, and a desire to arrive at some known basis for legislation. The motion brought forward in the House of Commons, by Mr. Mills, the chairman of that committee, defined the principle upon which union can be retained with the mother country—viz., that, while the Imperial Government would be at all times ready to assist in such expenditure as might arise out of imperial policy for thoroughly local purposes, the colonies ought to provide their own defence.

The removal of commercial restrictions at home, the gold discoveries, the rapidity and regularity of ocean conveyance, the diffusion of free labour by emigration have materially changed the aspect of affairs. Instead of being held in subjection, the colonies possess free representative institutions, as will be apparent from the debates in the Canadian and Australian legislative assemblies. The existence of such independence has occasioned much discussion at home, as to the relative value of the trade and outlets for population, and whether the taxpayers of this country are sufficiently compensated upon the terms imposed by the colonists. The startling opinions of Professor Goldwin Smith may not have gained adherents sufficiently numerous for us to anticipate the day when the extended arms of our widespread empire will be severed from the trunk; but evident signs exist which will ultimately lead to an entire change of policy. I therefore propose, first, to review the progress of public feeling as indicated by the debates in the House of Commons, from the

pages of "Hansard;" and then to lay before the Society a few statistics derived from the blue books at the Colonial Office, and the publications of the Board of Trade. In doing so, I have followed the grouping laid down by the Colonial Office, and adopted by Mr. F. Purdy in his paper upon Colonial Military Expenditure.

On 26th June, 1849, Sir William Molesworth, in proposing that a committee be appointed to inquire into the administration of Her Majesty's colonial possessions, said,—

"I share in the belief which now prevails, that our system of colonial government is in many respects faulty, and ill-suited to the present state of Great Britain and the colonies. Therefore, I maintain that it requires revision; and for that purpose I ask that a searching inquiry be made into the colonial polity of the British empire. During the past fifteen years the colonies have cost us at least 80,000,000*l.*, and in return for this outlay our export trade does not exceed 9,500,000*l.* annually. The chief subjects of inquiry may be arranged under the three heads of (1) colonial government, (2) colonial expenditure, (3) immigration and colonisation."

After a debate and a division this motion was negatived by a majority of 74, the numbers being 89 ayes and 163 noes.

On 8th February, 1850, Lord John Russell, in a lengthened speech, entered into an historical survey of the colonies and their several institutions:—

"By the repeal of the navigation laws last year," he said, "I conceive we have entirely put an end to the whole system of commercial monopoly. We have plainly declared that, on the one hand, if we require productions similar to those which the colonies produce, we shall be ready to take them from other parts of the world; and on the other hand, we have left the colonies free to provide themselves with the products of other countries than our own, and to impose upon the manufactures of Great Britain equal duties with those imposed on foreign manufactures. I now come to a question which has been much agitated, and which has found supporters of very considerable ability—viz., that we should no longer think it worth our while to maintain our colonial empire. In the first place, I consider it our bounden duty to maintain the colonies which have been placed under our charge; and in the next place, I say that there are many reasons why we should consider that our colonies form part of the strength of the empire. Many of our colonies have not the means of preserving anything like independence or security amidst the savage races by which they are surrounded. If they were abandoned by Great Britain, they would most naturally and justly apply to some other country for protection. I therefore think it absolutely necessary that the Government and the House should determine and declare what are the principles upon which they will hereafter proceed. With regard to our commercial policy, what we have in future to provide for is, that there shall be no duties of monopoly in favour of one nation against another, and that there shall be no duties so high as to be prohibitory against the produce and manufactures of this land. As to the mode of governing these colonies, we cannot do better than refer to those maxims of policy by which our ancestors were guided.

"I trust we shall never again have to deplore a contest similar to that which took place with the North American colonists. I anticipate, with others, that some of the colonies may so grow in wealth and population that they may say, 'Our strength is sufficient to enable us to be independent of England. The link is now become onerous to us; the time is arrived, we think, when we can, in amity and alliance with England, maintain our independence.' I do not think that time

is yet approaching. But let us give them, as far as we can, the capacity of ruling their own affairs. Let them increase in population and wealth, and whatever may happen, we of this great empire shall have the consolation of saying that we have contributed to the happiness of the world."

The following resolutions were then proposed and resolved:—(1) That provision be made for the better government of Her Majesty's Australian colonies; (2) That the governor and legislative councils of the Australian colonies be authorised to impose and levy duties of customs on goods, wares and merchandise imported into such colonies.

On 30th May, 1860, Mr. Adderley asked the House to consent to the appointment of a select committee on the subject of the better apportionment of the expenses for the defence of the colonies. He was of opinion that the present system of charging those expenses almost wholly on this country was not only burdensome to us, but mischievous in its effects upon the colonists themselves. He could not understand the reason why the British colonies should be the only part of the empire—indeed, of any empire in history—exempted both from personal service and money payment for the cost of their own defence. The effect of the arrangement was to weaken this country, by scattering the Queen's forces in small detachments all over the world. Again, on 31st May, 1860, Mr. Adderley, in calling the attention of the House to the report of the Committee on the Military Defences of the Colonies, said,—

"He thought it was essential to a proper discussion of the army estimates that the expenditure of this country upon colonial defences should be brought before the House. The report showed that the colonies of England contributed to their own defence about one-tenth only. Such a state of things was quite novel in the whole world's history, and an entire innovation upon the former treatment of her colonies by England. They had the report of a committee, representing three departments, now before the House, and he wished to know if the Government was prepared to act upon it."

Mr. C. Fortescue admitted that it was the duty of the Government to examine into the condition of every colony, and endeavour, by every means in their power, to reduce the amount and cost of the force employed, and to obtain from each the largest and fairest contribution towards its support.

On 5th March, 1861, Mr. A. Mills moved for, and obtained, a select committee on Colonial Military Expenditure, to inquire and report whether any and what alterations might be advantageously adopted in regard to the defence of the British dependencies, and the proportion of cost of such defences now defrayed from imperial and colonial funds respectively. On 18th April, 1861, the committee commenced its sittings, and amongst those examined were Messrs. Elliot and Merivale, of the Colonial Office; Earl Grey, the Duke of Newcastle, Mr. Robert Lowe, Lord Herbert, and Mr. Gladstone. The minutes

of evidence and the resolutions were ordered to be printed on the 11th July, 1861.

On 4th May, 1862, Mr. A. Mills brought forward and carried a resolution, "That the House, while it fully recognises the claim of all "portions of the British empire for imperial aid against perils "arising from the consequences of imperial policy, is of opinion that "the colonies exercising the rights of self-government ought to "undertake the main responsibility of providing for their own "internal order and security." Again, on 28th April, 1863, Mr. A. Mills called attention to the correspondence recently laid before Parliament, between Her Majesty's Government and the Government of Canada and New Zealand, respectively, concerning the military defences of those colonies. In reference to the war raging in New Zealand, he did not say that England would be able to retire altogether from these contests; but if the colonists, without being deserted, were taught to lean more on themselves, there would be fewer disturbances, and they would behave with greater circumspection to the native race, knowing that they would no longer be backed up in all their unrighteous claims. It must be remembered that the relation of England towards her colonies had entirely changed. She could no longer legislate for them. She could not recall the days when they were bound to her by exclusive commercial treaties, or when they were compelled to receive her criminal population. The question in the present day was no longer whether Great Britain should tax her colonies, but to what extent the colonies should be permitted to tax Great Britain. He believed that Great Britain had it in her power to retain her colonies—not like those of ancient Rome, in inglorious and unlovely subjugation, but in an affectionate and far more enduring allegiance. Mr. C. Fortescue concurred in many of the remarks that had fallen from Mr. A. Mills.

Mr. Adderley said they had at length come to the end of the third phase of colonial government. At first they left the colonies very much to themselves, only imposing restrictions upon their commerce, for a supposed advantage to the mother country. These two things did not agree with each other, freedom and subserviency; and when they attempted to tax the colonies in the Imperial Parliament, they separated themselves from the mother country on that ground. They attempted next to govern the colonies from Downing-street, and for many years there was a constant interference from that quarter. Not many years had elapsed since New Zealand found it impossible to build a lighthouse without a tedious process of obtaining sanction from the Crown in London. The departments of France were never more under the control of the Minister in Paris than the British colonies were then, at least in theory, under that of

the Colonial Secretary in London. Such a system could not last, and eventually it broke down completely. About thirty years ago England entered upon the third phase of colonial government, extending to her colonies the privilege of self-government, and yet at the same time retaining in her own hands their protection and defence. They now saw the end of this confusion of two principles.

II.—*North American Colonies.*

The North American group consists of the Canadas, Upper and Lower; Nova Scotia, New Brunswick, Prince Edward's Island, Newfoundland, British Columbia, and the new colony of Vancouver's Island. These extend over an area of 514,000 miles, and, according to the latest returns, number a population of 3,309,000 persons. The commerce—*i.e.*, imports and exports—in 1862 shows a total of 25,895,000*l.* sterling, of which 10,095,000*l.* was with the United Kingdom and 11,192,000*l.* with the neighbouring States of America. The tonnage of shipping employed in this great interchange of commodities (exclusive of the coasting trade) amounted to 4,915,000 tons, of which 4,069,000 tons were British. The revenue collected in the same period was 2,556,000*l.*; the chief sources of which were, derived from the customs, 1,501,000*l.*; sales of lands, 141,000*l.*; and postal services, 92,000*l.* The expenditure was somewhat in excess, being 3,031,000*l.*, amongst which the heaviest items were, for cost of civil government, 156,000*l.*; interest of debts, 871,000*l.*; public works, roads, &c., 292,000*l.*; education, 172,000*l.* The total of debt for the whole group in 1862 was 16,610,000*l.*, being an addition of 552,000*l.* over the preceding year.

In reviewing the details of some of the more important, we find the Canadas, in 1863, possessed a revenue of 2,006,000*l.*, and the expenditure was 2,207,000*l.* The imports for 1862, 10,125,000*l.*, show an increase of 1,155,000*l.* on the previous year; but there is a decrease in the dutiable articles, the customs receipts in 1861 being 993,000*l.*, and in 1862 969,000*l.* This result is attributed to the continuance of the civil war in the United States, and more especially to apprehensions excited by the seizure of the "Trent," and the subsequent action of the Imperial Government. The increased value of imports in 1862 is, therefore, altogether due to the importation of free goods, of which the value in the year was 5,130,000*l.*, and in 1861, 3,741,000*l.* Canada contains the grandest system of inland navigation in the world, and the reduction of the tolls on the Welland and their abolition on the St. Lawrence, and the greatly increased production of cereals in the Western States have caused a steady improvement. On the Welland the traffic in goods and ships, in 1859, was 1,567,000 tons; in 1860, 2,183,000 tons; and in 1862, 2,721,000 tons. On the St. Lawrence, in 1859,

1,397,000 tons; in 1860, 1,558,000 tons; and in 1862, 2,014,000 tons. The following table shows the quantity of grain sent eastward during the last seven years from the Lake Regions and Upper Canada:—

	Flour. (Barrels.)	Wheat. (Bushels.)	Corn. (Bushels.)	Other Grains. (Bushels.)	Total Reduced to Bushels.
	Mlns.	Mlns.	Mlns.	Mlns.	Mlns.
1856	3,865,	19,505,	14,283,	4,593,	57,708,
'57	3,398,	16,763,	8,780,	2,257,	44,790,
'58	4,499,	21,844,	10,496,	5,035,	59,873,
'59	3,760,	16,866,	4,423,	4,264,	44,354,
1860	4,106,	32,334,	18,076,	7,712,	78,652,
'61	6,534,	46,384,	29,525,	10,686,	119,264,
'62	8,360,	50,699,	32,985,	10,845,	136,330,

In the possession of the River St. Lawrence, flowing for more than 600 miles entirely within their own border, the people of Canada have an invaluable inheritance. The great inland lakes, of which this river forms the natural outlet to the ocean, alone exceed the area of Great Britain. The coast line of these great lakes and of the River St. Lawrence, which, by the enterprise of the people of this province, has been opened to the navigation of vessels of 400 tons burden, at a cost of upwards of 2,917,000*l.*, measures 5,600 miles, about one-half of which is American, fronting eight of the Western States of the Union, and the other half Canadian territory. It is in contemplation to give to the owners of the largest vessels now engaged in the trade of Lake Michigan, the option of trading to Kingston and the St. Lawrence, or to Buffalo, by which means the greater insurance and freights charged from the seaports of Europe over the corresponding charges from New York will be more than counterbalanced; and Quebec and Montreal may be expected to take rank amongst the principal grain marts of this continent. In addition to these facilities are the great lines of railroad, extending, on 1st January, 1861, 1,906 miles, and constructed at a cost of one hundred million dollars. The total receipts in 1860 were 1,401,000*l.*, and the expenditure, 1,391,000*l.* The Grand Trunk received upon 872 miles, 698,000*l.*, and the Great Western, upon 345 miles, 458,000*l.* In 1862 the postal services forwarded 10,200,000 letters, and the electric telegraph had 4,045 miles in operation.

In the province of New Brunswick the revenue, although small in comparison with the Canadas, has increased from 107,000*l.* in 1858 to 176,000*l.* in 1863, during which year the expenditure was expected to be considerably within the income. The total of imports in 1862 was 1,292,000*l.*, and the exports 804,000*l.* This would seem somewhat unsatisfactory, but in explanation it appears

that all outfits for new vessels figure as imports, while the vessels themselves are not included in exports; again, nearly all the imports are entered at their proper value, whilst a large amount of exports are shipped on the American side of the River St. Croix and the Canadian side of the River Restigouche, to avoid the duty. The articles wood and timber form the chief item, and in 1862 were valued at 529,000*l.* The total of new vessels registered at all the ports of New Brunswick in 1862 was 90, of 49,000 tons; and during 1863 shipbuilding has increased to an extraordinary degree, and shows no present signs of slackening. It is stated that the year 1862 was, on the whole, one of progress, and, although the effects of the war were still severely felt, trade had revived more rapidly than could have been expected.

In Newfoundland, the commerce of 1862 was 2,179,000*l.*, and amongst the chief articles of import was flour, valued at 226,000*l.*, and cotton, woollen, and silk manufactures, 153,000*l.*; and of export, cod fish, 787,000*l.*; herrings, 17,000*l.*; salmon, 13,000*l.*; and oil, 256,000*l.* The tonnage of shipping engaged was 274,000 British and 33,000 foreign. The revenue amounted to 116,000*l.*, expenditure 138,000*l.*, and debt existing 174,000*l.*

By reference to and compared with earlier statistics, it will be seen that the North American colonies have taken a new start in the race of nations, owing much to the commercial freedom conceded by Great Britain to her dominions, both at home and abroad. In 1806, it appears, the value of the united exports from these colonies was but 1,518,000*l.*; during the next quarter of a century after 1806 these had more than doubled, for in 1831 they were 3,442,000*l.* In 1851 they exhibit a total of 7,442,000*l.*, and in 1862 10,267,000*l.* The commerce of these colonies may truly be said to have had its birth within the past century. Equal with this constant increase of exports has been that of the shipping. In 1806 the tonnage of vessels cleared was 124,000, in 1831, 837,000, in 1851, 1,583,000, and in 1862, 2,477,000. The effect of opening the market to foreign timber, by a reduction of duties, has not, as was greatly feared, proved injurious to the colonies, by diminishing the price of their timber. The increased consumption in England, the demand for colonial wood for use in connection with the Baltic, and the reduced freights consequent on the change in the navigation laws, give the colonist a more favourable market for his articles than he had previous to the reduction of the duties. The inhabitants of our North American colonies being chiefly engaged in the pursuits of agriculture, the fisheries, mines and forests, and the climate yielding few of the requisites of luxury, a great proportion are essentially maritime; and amongst these active, enduring and intelligent fellow countrymen are to be found the bold seamen, ready alike to face the storms

of the Atlantic in extending our commerce to every part of the globe, or to uphold the honour of our flag. From the confederation of these separate units now in progress, and which is about to receive the sanction of the legislature, will probably date another era in the history of the North American colonies of Great Britain.

III.—*West Indian Colonies.*

The possessions of England, known as the "West Indies," comprise the group of islands situated between 10° and 23° 30′ north latitude, and between 59° 30′ and 79° west longitude, besides which there is the district of British Guiana on the continent of South America, and the settlement of Honduras in the province of Yucatan. The total population in 1862 was 1,082,000, with a commerce,—*i.e.*, imports and exports,—of 10,660,000*l.*, of which 6,706,000*l.* was with the mother country. The tonnage of shipping engaged in the traffic amounted to 1,433,000. The united revenues 1,061,000*l.*, of which 591,000*l.* was derived from the customs. The expenditure was 1,088,000*l.*, and total debt 1,669,000*l.* The chief products consisted of sugar, the exports of which from the Islands are valued in 1862 at 2,544,000*l.*, and from British Guiana 975,000*l.* Next in importance was rum, valued at 318,000*l.*, and from British Guiana 210,000*l.* Coffee, cocoa, and pimento were likewise increasingly cultivated in some of the group. The great act of justice, the admission of the black population to the full rights of citizenship, on the 1st August, 1838, a day memorable in the annals of British philanthropy, materially affected the general condition of these islands. It had been confidently predicted by the opponents of the measure, that it must insure the ruin of our sugar colonies. Although there is an absence of elasticity in the trade of this, compared with other portions of the colonial empire, yet there is reason to think the ordeal has been undergone with less harm than was anticipated. By comparing the annual average of trade for the five years preceding emancipation, *i.e.*, from 1832-36, and the five years in the period from 1858-62, as follows :—

	1832-36.	1858-62.
	£	£
Jamaica	4,744,000	2,208,000
Antigua	372,000	484,000
St. Christopher	230,000	316,000
Dominica	173,000	153,000
Trinidad	723,000	1,538,000
Tobago	207,000	128,000
Barbadoes	1,140,000	2,195,000
British Guiana	2,601,000	2,374,000

From this it would appear that the chief sufferer has been the Island of Jamaica, and whilst several remained stationary and some show an improvement, we must conclude that other causes exist to account for such a state of decadence. In turning to the despatch of the Governor, dated July, 1863, we find the year 1862 is stated to have been one of great depression, for which is assigned the continuance of the civil war in America, several disastrous fires at Kingston, and the long continuance of low prices for the staple products, and that there was reason to fear much additional land would be thrown out of sugar cultivation. On the other hand, it says that the high prices of coffee have stimulated its cultivation, chiefly amongst the peasantry and small proprietors, who are many of them well to do in the world. There is a hopeful sign from the exports of this article, which during the six months of 1863 nearly doubled the exports of the corresponding six months of 1862. From the same sources we are informed that in the Barbadoes, where the returns show a decided improvement, much privation existed amongst all classes. In British Guiana, successful experiments are being made in cotton cultivation, and the planters are applying for increased labour by immigration. The general tone is that of despondency; this, however, is not confined alone to the period succeeding emancipation, for in 1792 the Jamaica House of Representatives reported that, within twenty years, 177 estates had been sold for debt. Again, in 1807, the same body report that in the five years preceding emancipation, 65 estates had been abandoned. In 1831 a convention of delegates from all the West Indian colonies assembled at Barbadoes, upon the basis "that a unanimous expression of their sentiments in the present "alarming and depressed state of the West Indies would tend to "impress more strongly on Her Majesty's Government, and the "Parliament of England, the very urgent necessity which existed for "immediate and substantial relief, in order to save them from "impending ruin." The continuance of this feeling to the present time is scarcely justified by the state of the returns, as will be found *in extenso* in the summary tables; the war in the United States has seriously interfered with the exports of the smaller articles, the produce of the Islands, and has affected the ordinary transit trade. On the termination of this strife it is to be hoped affairs will assume an upward tendency, and that the West Indies, which once unfolded such golden visions to Columbus and his followers will share in the general prosperity of our colonial empire.

IV.—*Australian Colonies.*

The Australian group comprises New South Wales, Victoria, Southern and Western Australia, Tasmania, Queensland, and New Zealand. In 1862 their area was taken at 2,582,000 square miles, with

a population of 1,336,000, whose commerce—*i.e.*, imports and exports —was 58,119,000*l.*, of which 27,833,000*l.* was with the mother country. Of the former amount gold formed the following item, 13,972,000*l.* The shipping entered and cleared was 3,346,000. The revenues amounted to 7,231,000*l.*, of which 2,643,000*l.* was derived from the customs. The following shows the respective debts, reaching a total of 15,861,000*l.* :—

	£
New South Wales	5,803,000
Victoria	7,993,000
South Australia	853,000
West „	2,000
Tasmania	486,000
Queensland	124,000
New Zealand	600,000

The earliest settlers were located, in 1778, upon the eastern coast of the island, to which they gave the name of New South Wales. The first census of this colony was taken in 1828, showing a total of 36,598 persons; and again in 1833, with the result of 60,794; and on 31st December, 1863, the population is estimated at 379,000. The returns of trade are somewhat imperfect at the first stages, but for comparison we will take a more recent period, when they were accurately ascertained:—

	£
Imports and exports for 1832-36	1,492,000
„ (annual average) '37-41	3,118,000
„ „ '42-46	2,641,000
„ „ '52-62	10,656,000

In 1862 the imports were 9,335,000*l.*, being at the rate of 25*l.* 8*s.* per head of the population; and the exports 7,103,000*l.*, at 19*l.* 6*s.* per head. The imports, compared with the previous year, were as follows:—

	1861.	1862.
	£	£
From the United Kingdom	3,062,000	4,814,000
„ British Colonies	2,339,000	3,069,000
„ Foreign States	991,000	1,452,000
Total	6,392,000	9,335,000

showing an increase of nearly three millions on the imports of 1861, and more than three millions and a half upon the average

annual importations of the decade (1852-61). The estimated value of exports, the produce of the colony, were as follows, viz. :—

	1861.	1862.
Seaward—	£	£
Grain	85,000	153,000
Butter and cheese	21,000	19,000
Live stock	49,000	62,000
Salt meat	19,000	19,000
Hides and leather	100,000	106,000
Wool	1,396,000	1,284,000
Tallow	61,000	104,000
Timber	20,000	25,000
Gold	1,891,000	2,715,000
Coal	161,000	245,000
Total	3,803,000	4,732,000
Overland—		
Live stock	492,000	530,000
Wool, hides, &c.	380,000	527,000
Fish and other produce	3,000	10,000
Total	875,000	1,067,000
General total	4,678,000	5,799,000

Of the great staple produce, wool, the export during 1862, as compared with the previous year, was as follows :—

	1861.	1862.
	lbs.	lbs.
Seaward	12,746,000	13,482,000
Overland, *viâ* the Murray	5,425,000	7,506,000
Total	18,171,000	20,988,000

The returns of shipping afford ample evidence of the increased trade, exceeding both in numbers and tonnage that of any year of the last decennial period. The revenue in 1862 was 1,557,000*l.*, and in 1861 1,422,000*l.* The railway returns exhibit a largely increased traffic, both in passengers and goods :—

	Passengers.		Goods.	
	1861.	1862.	1861.	1862.
	No.	No.	Tons.	Tons.
Great Northern	126,000	143,000	60,000	156,000
„ Southern	254,000	354,000	36,000	41,000
„ Western	59,000	92,000	5,000	8,000
Total	439,000	589,000	101,000	205,000

The expenditure of the year in the construction and extension of railways was as follows :—

	£
Great Northern line	111,000
„ Southern „	127,000
„ Western „	72,000
Total.....	310,000

The despatch of the Governor, in summing up the results of 1862, says, whilst there has been no very extraordinary development in any of the known resources of the country, or any discovery of new fields of enterprise, a steady improvement has been apparent in all the main branches of industry.

The rise and progress of Victoria is, probably, unexampled in colonial history. But twenty-eight years have elapsed since the first settlers, proceeding from Tasmania, pitched their tents upon a vacant area at the head of Port Philip, and on this spot now stands the city of Melbourne. In 1836 the whole population of the new colony was estimated at 224 persons, in 1840 at 10,291, in 1852 at 168,000, and in 1862 at 574,000. The land sales in the latter year were 845,000 acres, and the amount realised 911,000*l.*, whilst the live stock was returned as—horses, 86,000; horned cattle, 577,000; sheep, 6,765,000; and swine, 53,000. From 1858 to 1862 the imports and exports averaged 28,106,000*l.*, and the tonnage of shipping 1,138,000. The value of gold exported from 1851 to 1862 was 110,227,000*l.*; in 1862 the exports of wool were valued at 2,351,000*l.*, tallow 67,000*l.*, and hides 130,000*l.* The public debt at the same period was 7,993,000*l.*, of which 7,381,000*l.* had been expended on the construction of railways. Such are the leading statistics of this colony, which in amount about equals the total of the whole North American group, and exceeds one-third of the commerce of British India.

Next in importance is New Zealand, which has, unfortunately, been the scene of lengthened hostilities with the natives. In 1862 the population is returned at 106,000; the imports and exports 7,049,000*l.*, of which 2,391,000*l.* were with the United Kingdom. The tonnage of shipping engaged was 590,000, the revenue 1,115,000*l.*, expenditure 1,118,000*l.*, and debt 600,000*l.*

The policy of England with regard to the management of her colonies has been severely commented upon, both in the House of Commons and by the press, as shown by extracts from "Hansard" in the first portion of this paper. The unprecedented prosperity of the Australian group may, however, be fairly accounted as the result of good government, of reasonable and timely concessions to the wishes of the people, and a just appreciation of their growing necessities.

At the commencement of the present century rarely a sail ever presented itself upon these southern seas, which have since become alive with commerce and social intercourse. The excitement consequent upon the discovery of the gold fields in 1851, resembled the era when Europe resounded with the wonders of the new world, and the Spanish adventurers of the fifteenth century rushed forward in crowds to seize the rich treasures of Mexico and Peru. Here were no spoils of ancient civilisation to reward the comers, only the wilds and products of nature to be wrought into a more enduring fabric by the enterprise of the Anglo-Saxon race. The importance of the gold fields was as readily acknowledged at home as claimed by the colonists, who contended for the same constitutional self-government which they had left on their native shores. The secessions that have since arisen, forming the present group, have simply been the results of that inherent interest in public affairs which distinguishes our countrymen, in whatever part of the world they may be located. No boon is said to be more grateful, or stimulus more effective, to a young community, than this fresh lease of life under a local and independent head. New South Wales has lost nothing, but has gained conspicuously by the accelerated greatness of Victoria and Queensland. The home authorities can, therefore, afford to look with a favourable eye upon these busy efforts of colonial secession, as they are in general so many additional bonds with England, as the mother country. When the separate colony has done its part for early progress and social consolidation, the separate system may in turn give way to the formation of one great Australian empire.

V.—*Eastern Colonies.*

The eastern possessions are Ceylon, Mauritius, Labuan, and Hong-Kong; the latter, although possessing a considerable tonnage in shipping, has not yet furnished any data of commerce. The chief are Ceylon and Mauritius, and each deserve a separate notice, did space permit; the former has, however, been so amply treated upon in the well-known work by Sir E. Tennent, the late Governor, that I purpose giving only a few of the leading statistics. In 1862 we find the area stated at 24,700 square miles, population 2,079,881 persons, of whom 15,000 were whites, 36,000 aliens and strangers, and the remainder the coloured races. The commerce 6,737,000*l.*, of which 2,540,000*l.* was with the United Kingdom and 3,132,000*l.* with British India; specie and bullion amounted to 1,799,000*l.* The principal articles exported during the past ten years have been, coffee in quantities 5,294,000 cwts., valued at 12,491,000*l.* Cinnamon 8,263,000 lbs., at 432,000*l.* Cocoa-nut oil 11,642,000 gallons, at 1,239,000*l.* Coir 428,000 cwts., at 296,000*l.* A total of 14,458,000*l.*

in that period. The revenue in 1862 was 759,000*l.*, towards which the customs contributed 237,000*l.* Salt sales 62,000*l.*, and land sales 111,000*l.* The expenditure was 627,000*l.* The debt in 1862 was *nil*, but a loan of 600,000*l.* has since been raised by the government for the construction of railroads.

The Mauritius, although almost solely a sugar growing colony, has flourished in contra-distinction to the West Indies. The island comprises an area of 708 square miles, and at the census in 1861 contained a population of 314,000, of which 27,000 were engaged in commerce. The residents in 1862 were estimated at 323,000 persons. In the Indian portion there is an increase from 224,900 to 229,400, and this is attributed to a growing disinclination on the part of immigrants to return to India at the expiration of their industrial residence; and the gradual formation of an Indian agricultural population likely to replace in a few years the old creole emancipated negroes. In 1862 the exports of sugar were 115,000 tons, valued at 2,233,000*l.*, and in 1862-63 we were informed the largest crop ever known has been raised, being 165,000 tons, chiefly due to a propitious season, extended and more careful cultivation of the soil, and a large introduction of immigrants during the two preceding years. The total commerce in 1862 was 4,956,000*l.*, showing an increase of 356,000*l.* over the year 1861. Two lines of railroad, 66 miles in length, constructed at a cost of 838,000*l.*, are shortly expected to be opened for the conveyance of produce and the traffic of passengers, and will add much to the resources and prosperity of this already flourishing colony.

VI.—*African Colonies.*

The Cape of Good Hope, in 1862, contained a population of 267,000 persons, living upon an area of 105,000 square miles, and carrying on a trade of 4,760,000*l.*, of which 3,227,000*l.* was with the United Kingdom, and 529,000*l.* with the United States. The principal export was wool, in quantity 25,209,000 lbs., valued at 1,283,000*l.*, of which the United States received 239,000*l.*, Holland 35,000*l.*, and Great Britain the residue. The tonnage of shipping entered and cleared was 643,000, the revenue yielded 716,000*l.*, and the expenditure was 684,000*l.* The debt was 565,000*l.*, bearing interest at 6 per cent., about the average rate received by investors in colonial securities.

VII.—*India.*

The population in 1862 was estimated at 143,000,000, the imports and exports 74,273,000*l.*, and an enormous development is apparent in the export of raw cotton. This in 1861 was valued at

7,342,000*l.*, in 1862 10,203,000*l.*, and in 1863 18,757,000*l.* The shipping engaged amounted to 3,402,000 tons, of which 2,283,000 were British. The revenue and expenditure had nearly attained an equilibrium, the former being 43,829,000*l.*, and the latter 44,870,000*l.*, including 7,624,000*l.* for home charges. The debt had reached 107,514,000*l.*, and in 1863 was 110,495,000*l.*

VIII.—*Summary.*

The united possessions of Great Britain, including the colonies and India, extend over an area of 4,347,000 square miles, upon which dwells a population of 152,775,000 persons, owning allegiance to the sway of Queen Victoria. The wants of this vast aggregate are represented by the commerce of which the imports in 1862 were 109,011,000*l.*, and the exports 94,830,000*l.*, to which may be added 500,000*l.* for gold from British Columbia, although not appearing in the returns: in all, a grand total of 204,341,000*l.*, of which 96,459,000*l.* was with the mother country. In 1863 there is a marked increase upon all previous years, as we find the imports amounted to 116,375,000*l.*, and the exports to 113,534,000*l.* The tonnage of shipping employed in the great traffic was 21,551,000, of which 6,729,000 was British. The revenues derived from various sources for the support and government of these possessions were 57,569,000*l.*, and the expenditure incurred in carrying on that government, and supplying the wants of the community was 57,999,000*l.* The debt accumulated by wars, rebellions, public works, harbours, railroads, all exigencies of such a wide empire, and bequeathed as a legacy to the present time—a subject for the attention of financiers—amounted in 1862 to 142,701,000*l.*

The statistics forwarded by the colonies to the office in Downing-street, in general, are prepared with much care, and evince considerable accuracy, especially the Australian, which are of a model description; but it is to be wished that in some instances greater explicitness were visible in regard to the flow of bullion and specie. From examination it appears that scarcely any such entries are made, except where gold forms one of the products of the colony, and it is necessary to bear this in mind in making a general comparison with the whole trade of Great Britain. By the returns of the Board of Trade, we find the imports from all countries to the United Kingdom, in 1862, were (exclusive of bullion and specie) 225,717,000*l.*, out of which we received from the colonies 27,480,000*l.*, from India 18,567,000*l.*, in all 46,047,000*l.*, being 20·40 per cent. upon the whole import trade. The exports to all countries from the United Kingdom were in the same year 166,168,000*l.*, of which the colonies received 30,328,000*l.*, and India 20,084,007*l.*, in all 50,412,000*l.*, being

at the rate of 30·33 per cent. upon the whole export trade. To treat upon the debateable question of the value of colonies, as such, to the mother country, would occupy more space than this paper will admit, and I have therefore attempted, solely, to place before the Society the statistics of the colonies as they at present appear, and in so doing I am much indebted for the obliging assistance rendered by W. Halksworth, Esq., librarian of the Colonial Office, W. M. Bucknall, Esq., acting in the same capacity at the Board of Trade, Charles C. Prinsep, Esq., of the India Office, and the publications issued by the Statistical Department of the Board of Trade.

A.—*Statement of the Value of the Imports into, and the Exports from the British Possessions in North America, Australia, Africa, the Mediterranean, and the Islands in the North and South Atlantic, with the Bullion*

[000's omitted.]

	Imports.						
	1858.	1859.	1860.	1861.	1862.	Average.	1863.
NORTH AMERICA.	£	£	£	£	£	£	£
Canada	6,058,	6,991,	7,177,	8,970,	10,125,	7,864,	9,576,
Nova Scotia	1,615,	1,620,	1,702,	1,522,	1,689,	1,630,	2,040,
New Brunswick	1,163,	1,416,	1,447,	1,238,	1,292,	1,311,	1,596,
Prince Edward Island	186,	235,	230,	210,	211,	214,	293,
Newfoundland	1,173,	1,323,	1,254,	1,153,	1,007,	1,182,	1,077,
British Columbia	—	—	257,	283,	560,	367,	560,†
Vancouver's Island	—	—	—	—	744,	744,	797,
Total	10,195,	11,585,	12,067,	13,376,	15,628,	12,570,	15,939,
AUSTRALIA.							
New South Wales	6,059,	6,597,	7,519,	6,392,	9,335,	7,180,	7,103,
Victoria	15,108,	15,623,	15,094,	13,532,	13,488,	14,569,	13,488,†
Queensland	—	—	742,	968,	1,323,	1,011,	1,713,
South Australia	1,769,	1,507,	1,640,	1,976,	1,821,	1,743,	2,028,
West Australia	145,	126,	169,	148,	173,	152,	157,
Tasmania	1,329,	1,164,	1,068,	955,	857,	1,075,	903,
New Zealand	1,142,	1,551,	1,548,	2,494,	4,626,	2,272,	4,626,†
Total	25,552,	26,568,	27,780,	26,465,	31,623,	27,598,	30,018,
AFRICA.							
Cape of Good Hope	2,495,	2,579,	2,666,	2,605,	2,789,	2,627,	2,276,
Natal	185,	200,	355,	403,	449,	318,	449,†
Total	2,680,	2,779,	3,021,	3,008,	3,238,	2,945,	2,725,
MEDITERRANEAN.							
Gibraltar		no	returns		2,474,	2,474,	2,622,
Malta	2,195,	2,429,	2,982,	2,947,	3,698,	2,850,	3,088,
Ionian Islands	1,324,	1,306,	‡	1,237,	1,273,	1,285,	1,232,
Total	3,519,	3,735,	2,982,	4,184,	7,445,	4,373,	6,942,
ISLANDS IN THE NORTH AND SOUTH ATLANTIC.							
Bermuda	141,	167,	153,	165,	239,	173,	321,
Bahamas	191,	213,	234,	275,	1,250,	433,	4,295,
St. Helena	100,	120,	124,	128,	138,	122,	138,†
Falklands	‡	14,	27,	27,	26,	24,	29,
Total	432,	514,	538,	595,	1,653,	746,	4,783,

* The exports of British Columbia are exclusive of gold, which, in 1860,
† The returns for 1863 have not at present been received at the Colonial
‡ No returns.

Colonies and Dependencies during the Seven Years ended with 1863 (*inclusive of and Specie*).

[000's omitted.]

Exports.							
1858.	1859.	1860.	1861.	1862.	Average.	1863.	
£	£	£	£	£	£	£	NORTH AMERICA.
4,890,	5,160,	7,215,	7,628,	6,999,	6,398,	8,715,	Canada
1,264,	1,378,	1,324,	1,155,	1,129,	1,250,	1,309,	Nova Scotia
811,	1,073,	916,	947,	804,	910,	1,029,	New Brunswick
153,	179,	201,	163,	151,	169,	209,	Prince Edward Island
1,319,	1,357,	1,272,	1,092,	1,172,	1,242,	1,233,	Newfoundland
—	—	12,*	13,*	12,*	12,*	12,†	British Columbia
—	—	—	—	—	—	40,	Vancouver's Island
8,437,	9,147,	10,940,	10,998,	10,267,	9,958,	12,547,	Total
							AUSTRALIA.
4,186,	4,768,	5,072,	5,595,	7,103,	5,345,	7,000,	New South Wales
13,989,	13,868,	12,963,	13,829,	13,039,	13,537,	13,039,†	Victoria
—	—	523,	710,	746,	660,	888,	Queensland
1,512,	1,656,	1,784,	2,032,	2,146,	1,826,	2,359,	South Australia
79,	93,	89,	96,	119,	95,	143,	West Australia
1,152,	1,194,	962,	905,	920,	1,027,	999,	Tasmania
458,	551,	589,	1,370,	2,423,	1,078,	2,423,†	New Zealand
21,376,	22,130,	21,982,	24,537,	26,496,	23,304,	26,851,	Total
							AFRICA.
1,798,	2,021,	2,080,	1,973,	1,971,	1,969,	2,224,	Cape of Good Hope
83,	111,	140,	119,	127,	116,	127,†	Natal
1,881,	2,132,	2,220,	2,092,	2,098,	2,085,	4,351,	Total
							MEDITERRANEAN.
	no	returns		2,556,	2,556,	2,233,	Gibraltar
1,529,	1,776,	2,301,	2,377,	2,991,	2,195,	2,420,	Malta
972,	649,	‡	901,	1,109,	908,	931,	Ionian Islands
2,501,	2,425,	2,301,	3,278,	6,656,	3,432,	5,584,	Total
							ISLANDS IN THE NORTH AND SOUTH ATLANTIC.
27,	34,	24,	30,	40,	31,	50,	Bermuda
92,	142,	157,	196,	1,008,	319,	3,369,	Bahamas
28,	21,	11,	9,	16,	17,	16,†	St. Helena
‡	7,	6,	16,	16,	11,	19,	Falklands
147,	204,	198,	251,	1,080,	376,	3,454,	Total

mounted to 600,000*l.*

Office from these colonies, those of 1862 have therefore been substituted.

A.—*Statement of the Value of the Imports into, and the*

[000's omitted.]

	Imports.						
	1858.	1859.	1860.	1861.	1862.	Average.	1863.
WEST INDIES.	£	£	£	£	£	£	£
Jamaica	1,059,	853,	1,203,	1,089,	1,142,	1,069,	1,088,
Honduras	208,	175,	201,	232,	211,	205,	266,
Turk's Island	42,	43,	42,	26,	36,	38,	45,
British Guiana	528,	1,180,	1,146,	1,340,	1,107,	1,060,	1,122,
Trinidad	826,	735,	829,	857,	734,	796,	711,
Windward Islands.							
Barbadoes	1,325,	1,049,	942,	924,	913,	1,031,	878,†
St. Vincent	161,	131,	150,	126,	140,	142,	108,
Grenada	103,	125,	126,	114,	113,	116,	91,
Tobago	62,	58,	52,	56,	55,	57,	47,
St. Lucia	102,	104,	98,	110,	94,	102,	70,
Leeward Islands.							
Antigua	266,	204,	226,	209,	186,	218,	115,
Montserrat	18,	20,	20,	25,	22,	21,	20,
St. Christopher	161,	110,	158,	137,	167,	147,	152,
Nevis	37,	35,	35,	33,	31,	34,	36,
Virgin Islands	5,	10,	15,	10,	8,	10,	9,
Dominica	65,	67,	63,	56,	61,	62,	48,
Total West Indies	4,968,	4,899,	5,306,	5,344,	5,020,	5,107,	4,806,
EASTERN.							
Ceylon	3,445,	3,474,	3,551,	3,664,	4,243,	3,675,	5,434,
Mauritius	2,785,	2,441,	2,769,	2,647,	2,439,	2,616,	2,541,
Hong Kong		no	returns			—	—
Labuan	16,	31,	38,	53,	43,	36,	71,
Total	6,246,	5,946,	6,358,	6,364,	6,725,	6,327,	8,046,
WEST COAST OF AFRICA.							
Sierra Leone	140,	170,	173,	168,	144,	159,	209,
Gambia	119,	76,	73,	110,	100,	96,	176,
Gold Coast	122,	115,	112,	163,	163,	135,	163,
Total	381,	361,	358,	441,	407,	390,	548,
Total Colonies	53,973,	56,387,	58,410,	59,777,	71,739,	60,057,	73,807,
India	31,093,	34,546,	40,622,	34,171,	37,272,	35,541,	42,568,
Grand Total	85,066,	90,933,	99,032,	93,948,	109,011,	95,598,	116,375,

† The returns for 1863 have not at present been received at the Colonial

Exports from, the British Colonies and Dependencies—Contd.

[000's omitted.]

Exports.							
1858.	1859.	1860.	1861.	1862.	Average.	1863.	
£	£	£	£	£	£	£	WEST INDIES.
1,179,	961,	1,226,	1,215,	1,113,	1,139,	1,008,	Jamaica
381,	288,	316,	293,	356,	327,	391,	Honduras
36,	33,	34,	25,	33,	32,	34,	Turk's Island
881,	1,229,	1,513,	1,584,	1,365,	1,314,	1,679,	British Guiana
786,	821,	715,	646,	740,	742,	796,	Trinidad
							Windward Islands.
1,468,	1,226,	984,	1,075,	1,068,	1,164,	981,†	Barbadoes
182,	179,	172,	184,	143,	172,	142,	St. Vincent
186,	131,	126,	112,	88,	129,	112,	Grenada
72,	78,	67,	63,	76,	71,	49,	Tobago
95,	102,	106,	96,	88,	97,	87,	St. Lucia
							Leeward Islands.
325,	289,	254,	237,	226,	266,	233,	Antigua
17,	17,	17,	21,	15,	17,	15,	Montserrat
188,	136,	187,	158,	176,	169,	176,	St. Christopher
46,	48,	41,	40,	43,	44,	50,	Nevis
16,	12,	17,	21,	16,	16,	12,	Virgin Islands
85,	97,	80,	100,	94,	91,	73,	Dominica
5,943,	5,647,	5,855,	5,870,	5,640,	5,791,	5,838,	Total West Indies
							EASTERN.
2,329,	2,525,	2,550,	2,706,	2,494,	2,521,	3,588,	Ceylon
2,209,	2,560,	2,260,	1,953,	2,517,	2,300,	2,720,	Mauritius
	no	returns			—	—	Hong Kong
5,	6,	13,	15,	13,	10,	22,	Labuan
4,543,	5,091,	4,823,	4,674,	5,024,	4,831,	6,330,	Total
							WEST COAST OF AFRICA.
225,	247,	304,	213,	269,	252,	296,	Sierra Leone
228,	110,	109,	137,	154,	148,	137,	Gambia
154,	119,	111,	146,	146,	135,	146,†	Gold Coast
607,	476,	524,	496,	569,	535,	579,	Total
45,435,	47,252,	48,843,	52,196,	57,830,	50,311,	65,534,	Total Colonies
28,279,	30,532,	28,889,	34,090,	37,000,	31,758,	48,000,	India
73,714,	77,784,	77,732,	86,286,	94,830,	82,069,	113,534,	Grand total

Office from these colonies; those of 1862 have therefore been substituted.

B.—*Summary Statement of the Revenue and Expenditure of the*

[000's omitted.]

	Revenue.					
	1858.	1859.	1860.	1861.	1862.	Average.
	£	£	£	£	£	£
North American	2,252,	2,409,	2,439,	2,791,	2,556,	2,489,
Australian	6,015,	6,397,	5,957,	6,392,	7,231,	6,399,
Cape of Good Hope and Natal	510,	702,	830,	863,	826,	746,
Mediterranean	375,	310,	320,	329,	361,	339,
Islands in North and South Atlantic	78,	77,	83,	89,	91,	84,
West Indies	920,	983,	1,001,	1,039,	1,061,	1,001,
Eastern	1,279,	1,428,	1,423,	1,370,	1,390,	1,378,
West Coast of Africa	54,	55,	56,	62,	53,	56,
Total Colonies	11,483,	12,361,	12,109,	12,935,	13,569,	12,492,
India	32,000,	36,000,	40,000,	43,000,	44,000,	39,000,
Grand total	43,483,	48,361,	52,109,	55,935,	57,569,	51,492,

ritish Colonies and India during the Five Years ended with 1862.

[000's omitted.]

Expenditure.						
1858.	1859.	1860.	1861.	1862.	Average.	
£	£	£	£	£	£	
2,859,	2,760,	3,307,	3,607,	3,031,	3,113,	North American
4,726,	5,278,	5,047,	5,287,	6,238,	5,315,	Australian
543,	715,	810,	885,	783,	747,	Cape of Good Hope and Natal
325,	320,	329,	357,	341,	334,	Mediterranean
75,	78,	82,	96,	93,	85,	Islands in North and South Atlantic
896,	968,	1,058,	1,096,	1,088,	1,021,	West Indies
1,185,	1,343,	1,287,	1,221,	1,366,	1,280,	Eastern
52,	54,	56,	62,	59,	57,	West Coast of Africa
10,661,	11,516,	11,976,	12,611,	12,999,	11,953,	Total Colonies
41,000,	51,000,	52,000,	48,000,	45,000,	47,400,	India
51,661,	62,516,	63,976,	60,611,	57,999,	59,353,	Grand total

On the Extension *of* Modern Subjects, *as* Parts *of* Regular Study, *in* Educational Institutions. *By* James Heywood, M.A., F.R.S., *one of the Vice-Presidents of the Statistical Society.*

[Read before the Statistical Society, December, 1864.]

For the assistance of *undergraduate* studies at Oxford, an annual income of 25,000*l.* a-year is set apart from the college endowments. This large amount is distributed into about 360 scholarships, usually tenable for five years each, and of an average yearly value of 70*l.* in in each case.

Scholarships at Christchurch, Oxford, are termed junior studentships, and thirty-one of these rewards of youthful industry have been opened to Oxford undergraduates generally, and are distributed in the following order:—

1. For classics, grammar, &c.
2. Ditto, ditto.
3. For mathematics.
4. For classics, grammar, &c.
5. Ditto, ditto.
6. For natural science, &c., &c., &c.

Thus every third open junior studentship is given for proficiency in mathematics, and for proficiency in physical science, alternately.

Professor Faraday is of opinion, that one-fifth of the time which an individual sets apart for study, ought to be devoted to the attainment of natural knowledge; and, assuming this conclusion, we find that the proportion of one-sixth of the open scholarships of Christchurch which were reserved for the benefit of natural science by the Oxford Parliamentary Commissioners of 1854, may be regarded as nearly representing the proportionate claims of that branch of knowledge on Oxford endowments. It is to be regretted, however, that the example of Christchurch has been but little followed in this respect in other colleges.

College scholarships have an important bearing on the Oxford system, as out of them about two-thirds of the fellows of colleges are generally selected, and from the fellows the tutors are chosen in each college, to superintend the business of higher education, and, in a great measure, to govern the university.

Under the Oxford tutors, nearly half of the clergy of the Church of England and many of the future masters of grammar schools receive instruction. A University degree is an approved mode of preparing for clerical ordination, as well as for secular professions.

Parliament, in 1570, gave a sanction to the effort of maintaining Latin as a spoken language, by enacting (in 13 Eliz. cap. 12) that a candidate for ordination should be able to give an account of his faith in Latin.

More than a hundred years afterwards, very different sentiments were entertained, when John Locke, in his thoughts on education, recommended to a friend that he should obtain, if he could, for his son at school, that the boy be not employed in making Latin themes and declamations, and, least of all, verses of any kind.

If the invention of boys must be quickened by exercises in composition, Locke advised that the boys "should make themes in "*English*, where they have facility and a command of words, and will "better see what kind of thoughts they have when put into their "own language."*

"If any one will think poetry a desirable quality in his son," observed Locke, "and that the study of it would raise his fancy "and parts, he must needs yet confess, that to that end, reading the "excellent Greek and Roman poets is of more use than making bad "verses of his own, in a language that is not his own."

"Another thing," Locke remarked, "very ordinary in the vulgar "method of grammar schools, there is, of which I see no use at all, "unless it be to baulk young lads in the way of learning languages, "which, in my opinion, should be made as easy and pleasant as may "be; and that which was painful in it, as much as possible, quite "removed. That which I mean, and here complain of is, their (the "boys) being forced to learn by heart great parcels of the authors "which are taught them; wherein I can discover no advantage at all, "especially to the business they are upon."†

Dean Peacock, who was for many years a distinguished and popular tutor of Trinity College, Cambridge, recommends all compositions in Greek and Latin verse to be excluded from the Cambridge University examinations for the degree of Bachelor of Arts with classical honours.

The mind of the Cambridge classical student is described by the kind-hearted Dean of Ely, as "distracted with the necessity, which "the existing regulations of the University imposed upon him, of "imitating nearly every species of Greek and Latin poetry which was "known to antiquity; he must write Sapphics after the manner of "Sappho; Iambics, and sometimes Trochaics and Anapæstics, in "imitation of the Tragedians and Aristophanes; Hexameters, after "the model of Homer; whilst in Latin, he must be able to imitate "the lyrical metres of Horace, (including his Alcaics, which no other

* "Some Thoughts concerning Education," by John Locke, in "Locke's "Works," vol. ix, p. 166.

† "Locke's Works," vol. ix, page 168.

" Latin poet attempted to compose), and the Hexameters and Elegiacs " of Virgil, Ovid, and Tibullus."*

If the power of classical composition has once been imperfectly acquired by a boy educated at one of the English public schools, Dean Peacock is of opinion that the suspension of the practice of that art during the one or two years which are interposed between school and the university, will be found generally sufficient to obliterate all traces of its existence; for it may be safely asserted, that there is not one in ten of the entire number of those who enter the University who is capable of writing Latin verse, and still fewer Latin prose, with tolerable correctness or elegance.

In France, the practice of verse compositions, either in Greek or Latin, has been limited to hexameters and pentameters, and there is no evidence of any lessening on that account of the elegance of style and accuracy of speech, which characterize a well-educated gentleman.

" What worse education can there be," observed the Right Hon. Robert Lowe, M.P., " than that of trying to make a lad a poetaster ?† " Any man of fair education can string verses together, but among " ten millions of men who can do this, there will not be found " one whom nature hath endowed with the gifts of a true poet. " What can be more absurd, then, than to attempt to make young " men write verse, who, from the extreme rarity of the gift, cannot " possibly succeed."

Professor Price ‡ remarks of Oxford, in 1863:—

" During the last four years, I have become acquainted, through " the Oxford local examinations, with the standard of knowledge of " arithmetic and mathematics possessed by boys belonging to the " middle class schools, and I find it, for extent and accuracy, far " superior to that which is exhibited by the candidates for matricula- " tion from public schools who come under my notice. These latter " can, in many cases, scarcely apply the *rules* of arithmetic; and " generally egregiously fail in questions which require a little " independent thought and common sense."

The Rev. H. Girdlestone, M.A., of Christ's College, Cambridge, observes, that at the " Previous examination, in October, 1862, in " that University, out of 260 candidates, there were 86 decided " failures in arithmetic and algebra.

In June, 1862, in the Cambridge examination for the ordinary B.A. degree, out of 161 candidates, there were 91 candidates in

* " Peacock on Cambridge Statistics," p. 159.

† Speech of the Right Hon. R. Lowe, M.P., at the distribution of prizes connected with the Oxford University Local Examinations, at Nottingham, 28th October, 1864.

‡ " Appendix to the Report of the Public School Commission," p. 24, 1864. Professor Price, M.A., F.R.S., F.R.A.S., Fellow of Pembroke College, Oxford, is Sedlcian Professor of Natural Philosophy at Oxford.

whose papers of English translations from a Greek author set on that occasion, the examiner found mistakes in spelling.

Valuable statistical tables are given by the Public School Commission, respecting the employment of time in regular lessons, within school hours, in nine of the largest English schools.

A general idea of the importance attached to Latin and Greek in Eton* and Winchester Schools, may be obtained from the Tables I and III at the end of this paper, which have been taken from the Appendix to the "Report of the Public Schools Commission."†

At Rugby, all the boys must learn either modern languages or natural philosophy. In 1861, about 425 boys were learning modern languages, and 40 natural philosophy, the latter chiefly in the upper school: 4 boys were learning both modern languages and natural philosophy.

Rugby school is divided into nineteen sets, none of which include more than thirty boys a-piece for modern languages.

Each set has two hours of schooltime a-week for modern language lessons, which are thus apportioned, one quarter of an hour or twenty minutes are given to looking over exercises in French or German, which have been written out of school, and about half an hour is then devoted to hearing construing in either French or German. No places are taken in the upper school, but marks are given. In the middle and lower schools, places are taken.

* At Eton, in the course of a year, the following portions of Latin and Greek books are committed to memory by the boys in three of the senior classes of the school:—

THE REMOVE.

Stanzas Committed to Memory—

Horace	512

Verses Committed to Memory—	Lines.
Virgil	1,100
Ovid	750
Poetæ Græci	1,280

FIFTH FORM.

Virgil V and VI books of the Æneid.
Horace, nearly the whole of the Satires and Epistles, and Book II, and Part III of the Odes.
Theocritus, 20 pages in the Poetæ Græci.
Homer, first four books of the Iliad.

UPPER FIFTH FORM.

70	lines of	Horace, weekly.
40	,,	Ovid's Fasti, weekly.
70	,,	Virgil or Lucretius, weekly.
100	,,	of Homer, weekly.
36	,,	Theocritus, occasionally.
40	,,	Demosthenes, ,,
60	,,	of Greek plays, weekly.

† "Appendix to the Report of the Public Schools Commission," Table D, pp. 456 and 459. These statistics represent the employment of schooltime in 1861.

The number of marks assigned by the Rugby Modern Language Masters is subject to the revision of the master of the form to which the boys respectively belong, and in one or two instances the number of marks thus bestowed has been reduced by the form master, as excessive. Thus 120 marks, given for French or German, by the modern language master, may have been reduced to 100 marks by the form master.

It is pleasing to notice, that in the regulations of the University of Edinburgh relating to degrees in science, an alternative is allowed in the preliminary examination for such degrees, between the Greek language and two modern languages (one of which must be French),* this examination being intended to afford proofs of the candidates having received a liberal education.

Among the standards of qualification for employment as attachés, under the Foreign Office, a knowledge of Greek is not insisted upon.† Success in the first public examination in classics at one of the Universities in Great Britain or Ireland, is mentioned as a sufficient proof of classical attainment; but where such an academical examination has not been passed, the candidate is merely examined, so far as classics are concerned, in the Latin grammar and in translation from Latin.

Eleven compulsory subjects are directed by the Foreign Office to be included in the examination for attachés, which are thus arranged:—

1. Orthography and handwriting.

The Civil Service Commissioners notice, in their report, that *legibility* is the main characteristic which they demand for handwriting. They require,‡ "as candidates are invariably informed, the "clear formation of the letters of the alphabet."

2. General intelligence, as evinced by the manner in which the candidate acquits himself, and specifically by the quickness he may show in seeing the points in papers read to him, or read over by him once or twice.

3. Précis (a summary or abstract).
4. Latin (grammar and translation).
5. French.
6. German.
7. Geography.

* "All candidates for a degree in physical and natural science, must give proofs "of having received a liberal education, by being either bachelors or masters of "arts, bachelors or doctors of medicine or surgery, holders of two departmental "certificates in the faculty of arts in Edinburgh, matriculated students of the "University of London, or, failing any of these qualifications, the candidate must "pass a preliminary examination in English, Latin, logic, arithmetic, the elements "of mathematics and mechanics, and either Greek or two modern languages (of "which French must be one), as an alternative for Greek." — "Edinburgh "University Calendar for 1864-65," p. 114.

† "Ninth Report of Her Majesty's Civil Service Commissioners, 1864," p. 19.

‡ "Civil Service Commission Report, 1864," p. vii.

8. A fair knowledge of the political history of Europe and of North and South America, from the year 1660 to 1860 inclusive, and of the most important international transactions during that period.

9. Arithmetic (the first four rules and decimals. — Colenso).

10. Euclid, Book I.

11. A general knowledge of maritime and international law (to be acquired from "Wheaton's Elements of International Law," and the first volume of Kent's Commentary).

Spanish and Italian are added to the list, as optional subjects.

For the Indian Civil Service, modern subjects are allowed a prominent position, and the relative value of different branches of knowledge receives a definite expression in the following table of marks to be given for success in the various subjects of examination:—

	Marks.
English literature and history	1,000
,, composition	500
Greek language, literature and history	750
Latin ,, ,,	750
French ,, ,,	375
German ,, ,,	375
Italian ,, ,,	375
Mathematics, pure and mixed	1,250
Natural science	500
Moral sciences (logic and moral philosophy)	500
Sanskrit language and literature	375
Arabic ,, ,,	375

A "competent knowledge" of each of these subjects is decided by a candidate obtaining one-sixth of the marks in English, Latin, Greek, Sanskrit or Arabic; one-half in French, German or Italian; one-tenth in pure and mixed mathematics; and one-fourth in the natural and moral sciences.

The first place in the list of candidates selected in 1863 for India, was obtained by Mr. George Smeaton, aged 21, who had been educated in the Universities of Edinburgh and Berlin. His examination was rewarded with 3,200 marks, distributed as follows:—

	Marks.
English literature and history	542
,, composition	150
Greek language, literature and history	437
Latin ,, ,,	437
French ,, ,,	242
German ,, ,,	261
Italian ,, ,,	252
Moral sciences	331
Sanskrit	256
Arabic	292
Marks	3,200

For the Woolwich Royal Military Academy, mathematics are essential, and a knowledge of either French or German has a higher relative value, when compared with Greek or Latin, than in the Indian Civil Service, the modern language papers in the Woolwich list, each reckoning for two-thirds of the number of marks assigned to each of those on classics.

The following scale of marks is appointed for the Woolwich Academy examinations :—

	Marks.
French	1,000
German	1,000
Mathematics, pure—	
First section	2,000
Second „	500
Mixed mathematics	1,000
English language and composition	1,000
History of the British empire	1,000
Modern geography	1,000
Latin	1,500
Greek	1,500
Hindustani	1,000
Experimental sciences (chemistry, heat, electricity, including magnetism)	1,000
Natural sciences (geology and mineralogy)	1,000
Geometric drawing	500
Freehand drawing	500

No candidate is allowed to pass in more than five subjects, of which one must be mathematics, and no one who does not obtain at least 700 marks in the first section of pure mathematics, will be eligible for an appointment.

A knowledge of modern languages and of geometric drawing is recommended by the Council on Military Education, as contributing greatly to a candidate's future success at the Royal Military Academy.

In July, 1864, there were twenty-five successful candidates, of whom eight had been educated wholly or partially at public schools. Table IV, at the end of this paper shows the number of marks which were obtained by these eight public schoolmen :—

M. Esquiros, examiner in French for Woolwich Academy, remarks on the examination of July, 1864, that a want of practical French instruction was discernible in the essay to be written in French, the subject of which was "Chelsea Hospital," and also in the translation of English into French.

"Most of the candidates," he observes, "are far from being "altogether deficient in words and expressions, yet they want a "greater facility in the construction of a sentence."

"Modern languages," observes M. Esquiros, "are to be learned "mainly by practice and colloquial intercourse between the pupil

" and the tutor. The necessity of appealing to the ear cannot be " better illustrated than by the general condition of candidates, and, " above all, their difficulty in catching the French sounds.

" Writing from dictation has been several times pointed out, as a " capital exercise; yet it would be more useful still, if the master, " not contented with uttering French words to be written down, had " forced his pupils to re-echo back on the spot, with a clear voice, " what they have just heard from him. Such a method," continues M. Esquiros, " I have seen flourishing in Holland, and, as applied to " modern languages, it has always been found more efficient."*

To prepare candidates for a searching and practical examination in modern languages and practical science, it is requisite that in the generality of schools a larger portion of regular school hours should be devoted to modern subjects.

A modern school has been formed in Marlborough College, specially to afford a systematic education in the different subjects likely to be required in a public competitive examination, either for civil or military service. Its distribution of employment in regular school lessons is exemplified in Table VI, at the end of this paper, taken from the Appendix to the Report of the Public School Commission.

Wellington College has been arranged on a plan, of the classes of boys in the older portion of the school being generally subdivided into a classical and a mathematical division; Greek studies being dropped in the modern or mathematical department.

Table V, at the end of this paper, illustrates the employment of schooltime in lessons at Wellington College.

Modern languages, according to the head master of Wellington College, are decidedly popular subjects among the boys;† and while " many enter the college firmly grounded in one or the other (French " or German), many also, who have begun both languages in college " are as forward as any boys, except those who have not only lived " abroad, but while abroad have been carefully taught."

A portion of Guizot's " Histoire de la Civilisation en France," about ten pages at a time, forms at once a French and an historical lesson at Marlborough College, and the Rev. G. G. Bradley, head master, reported in 1862, to the Public Schools Commission,‡ that he believed this to be, in many ways, the most useful lesson which he had, and that he learnt from it the capacities and intellectual promise of his pupils, more than from almost any other subject which he taught.

* " Report on the Examination for Admission into the Royal Military Academy " at Woolwich, July, 1864," p. 20.

† " Report of the Public Schools Commission," vol. ii, " Appendix, 1864," p. 533.

‡ " Appendix to the Report of the Public Schools Commission," p. 515, Table C., Marlborough College, Historical and French lessons.

The Rev. J. F. Bright writes to the Public School Commissioners respecting the modern school in Marlborough College, "that if there "were the same appliances for modern as for classical teaching, the "same well annotated books, the same carefully arranged grammars, "the same accepted curriculum of classical authors, an education "might be given in modern as accurate as in ancient subjects; "while in comprehensiveness, in so far as it would be concerned "with the wider field of modern thought, it might even have the "advantage."*

An abstract is given, in Table II, at the end of this paper, of the series of French and German books in use at Rugby School, in 1861,—which is taken principally from the general arrangement of that school for teaching modern languages, published in Table B in the Appendix to the "Report of the Public Schools Commission," p. 372. The comparison of this list with the details of similar sets of French and German works in other schools would be useful.

University College School, in Upper Gower Street, London, is arranged so as to give considerable schooltime to modern subjects.

Its junior department, for boys from 7 to 9 years of age, has about twenty-six pupils. They have $22\frac{1}{2}$ hours of school work in a week, distributed as follows:—

	Hours of Lessons.
Arithmetic	6
Reading, spelling, dictation, simple composition, repetition of poetry	$4\frac{1}{2}$
French	2
Geography	3
History	$1\frac{1}{2}$
Objects	$1\frac{1}{2}$
Writing	4
Hours	$22\frac{1}{2}$

The senior department of the school is divided into six classes, containing in all rather more than three hundred boys. Lessons are not prepared in the school, except occasionally in the lower classes (I, II, III).

Table VIII, at the end of this paper, shows the employment of time for lessons in the week in the senior department of the school.

Neither Greek nor Latin verses form any part of the system of lessons at University College School. Greek is not begun before a boy has reached the third class, and may be given up at the wish of the parent or guardian of a pupil. Latin is steadily pursued, and exercises are given in Latin prose composition.

* "Report of the Public Schools Commission," vol. ii, "Appendix, 1864," p. 513.

French obtains about two-fifths of the week's school time for some years, and afterwards about one-tenth. Natural science in the higher classes engages a fair share of attention.

The head master of University College School has been requested by the council of the college, to call together the assistant masters, at least once in every term, to consult with them as to the management and arrangement of the classes; in order that their separate experiences may be combined, improvements suggested, and other matters of detail discussed and settled.

It is deemed essential that parents should communicate any suggestions that they may wish to make, to the head master, as soon as possible after the commencement of the holidays.

These suggestions should especially include a statement of the parent's views with regard to such subjects as Greek, mathematics, natural philosophy, chemistry, and German, when the time for commencing these studies may be thought to be drawing near.

Any pupil may omit Greek, or Greek and Latin, and devote his whole attention to the other branches of education.

In the University of Toronto, in Canada, Greek is not required for the matriculation of medical students; the compulsory subjects of examination for entrance, are: — Latin construing, elementary mathematics, English history and geography, chemistry, natural history, and the elements of botanical science.*

Candidates for a scholarship are expected, in addition to these subjects, to be examined in Greek, algebra, and French, and in translating into Latin prose.

The time seems to have arrived, when a knowledge of Greek should no longer be compulsory for entrance into any English University.

Ten years ago, religious tests were removed from matriculation, and partially from the degree of Bachelor of Arts of Oxford. An improvement in the studies of seats of learning is now as important as the opening of academical education to different religious denominations was considered at that time.

"A deep conviction has taken possession of the public mind of "England," observes Sir Charles Lyell,† "that far too much time is "now sacrificed in our principal schools and universities to the study "of Greek and Latin, and, above all, to the effort (so often a vain one) "to acquire a facility in writing elegant prose and verse in these "languages."

The precedent of direct legislative interference with local statutes

* "Annual Announcement of the Toronto School of Medicine, in Affiliation "with the University of Toronto," Toronto, 1864, p. 11.

† "Evidence of Sir Charles Lyell, Bart., M.A., F.R.S., in the Oxford Univer- "sity Royal Commission Report, 1852," p. 121.

about scholarships was set in 1856, when religious tests were removed from Cambridge College exhibitions and scholarships, by the following clause of the Cambridge University Act:—

"It shall not be necessary for any person, on obtaining any "exhibition, scholarship, or other college emolument available for "the assistance of an undergraduate student in his academical "education, to make or subscribe any declaration of his religious "opinion or belief, or to take any oath, any law or statutes to the "contrary notwithstanding."

In the sixteenth century, a change of studies was carried into effect at Oxford, on the suppression of monasteries, by a Royal Commission under Thomas Cromwell, chief Secretary of State to Henry VIII. The works of Duns Scotus, "the subtle doctor," were removed from the college libraries, and Dr. Layton reported, in 1535, to Cromwell, that he had found "all the great quadrant "court of New College full of the leaves of Duns, the wind blowing "them into every corner."

At the revival of letters in the fifteenth century, modern languages were comparatively rude, and the native literature of France, Germany and England of small importance. The last four centuries have witnessed the growth of modern nations into a state of high civilisation; and at the present day, proficiency in modern literature is worthy of being fostered by rewards and honours.

Some change in the constitution of public schools may be expected by act of parliament, and it is desirable that legislative authority should be obtained to abrogate the antiquated and exclusive system of writing Greek and Latin verse both at school and college, and to revise the subjects of examination for exhibitions, prizes and scholarships.

A clause ought also to be prepared in a parliamentary bill to terminate the repetition of the Thirty-nine Articles of the Church of England, as part of the regular lessons of the half-year, in Merchant Taylors' School, London. Such an antiquated custom is exemplified in Table VII, at the end of this paper.

Scholarships abound in the existing colleges both of Oxford and Cambridge, and the revision of the subjects of examination for those collegiate rewards, so as to afford encouragement in a larger measure to modern subjects, would influence all the public schools of the country in favour of modern languages and physical science.

Parents, under an improved system of examinations for college scholarships, would approve of a reduction in the staff of Greek and Latin masters at public schools, and of the appointment of suitable teachers of modern subjects in those institutions.

APPENDIX.

TABLE I.—*Employment of Time at Lessons and Work, for a regular Week, 1861-62, at Eton College. (No Lessons are prepared in School.)*

Subjects of Lessons.	Lower School.			Upper School.				
	First and Second Forms.	Third Form.		Fourth Form.	The Remove.	Fifth Form.	Upper Fifth Form.	Sixth Form.
		Third and Fourth Division.	First and Second Division.					
	Number of Boys.							
	18	36	64	160	160	300	32	32
	Hours of Lessons.							
Scripture and divinity	4	4	2	—	—	—	—	—
Greek Testament ..	—	—	—	—	1	—	—	—
Latin, including repetition and composition ..	10	10	9	4	8	7	7	7
Greek, including repetition and composition ..	—	3	4	10	4	9	11	12
English history or geography	2	2	3	2	1	—	—	—
Writing and dictation	3	3	3	—	—	—	—	—
Arithmetic and mathematics ..	3	3	3	3	3	3	3	3
Geography	2	1	—	—	2	—	—	—
Total of hours....	24	26	24	19	19	19	21	22

TABLE II.—*French and German Books in Use at Rugby School in* 1861.

Ahn's French Grammar and Exercises; Gasc's First French Book; Gasc's Histoires Amusantes et Instructives; Hamel's French Exercises; Lamé Fleury, Mythologie; Miss Sewell's Extraits Choisis; Miss Sewell's Contes Faciles.

Heimann's Fifty Lessons (German Exercises); German Accidence (prepared for Rugby School); Wittich's German Exercises; Niebuhr's Griechische Helden-Erzählungen.

Voltaire's Charles XII; About, Le Roi des Montagnes; Karcher, Biographies Militaires; Valentin, Histoire des Ducs de Bourgogne; Ségur, Napoléon et la Grande Armée; Mignet, Histoire de la Révolution Française, vol. i.

Lessing, Fabeln; Lettan, Blücher's Leben; Buckheim's Extracts from Goethe's Italienische Reise.

Corneille, Horace; Life of Schamyl, in English (for translation into French); La Fontaine, Fables.

TABLE II.—*French and German Books in Use at Rugby—Contd.*

Mignet, Histoire de la Révolution Française, vol. ii.

Herder, Der Cid; Ahn's Third German Course; Hauff's Märchen.

Mémoires de Cléry (vol. ix of Barrière's Bibliothèque des Mémoires, relatifs à l'Histoire de France, 18me siècle).

Life of Arago, to be translated into French. Roche (Ecrivains Français), vol. ii. Life of Turenne, for re-translation into French. Michelet, Louis XI et Charles le Téméraire.

Schiller's Gedichte. Goethe, Götz von Berlichingen.

Vicar of Wakefield, for re-translation into English; Madame de Staël, De 'Allemagne; Mariette.

Half hours of French translations: Lessing, Minna von Barnhelm; Heimann, German Exercises, part 2; Voltaire, Alzire.

*** Since the publication of the Public Schools Commission Report in 1864, a Master of Natural Philosophy has been appointed at Rugby, and it is expected that all the boys will receive instruction in physical science, as well as in either French or German. The appointment of a similar teacher is intended for Harrow School.

TABLE III. — *Employment of Time in Lessons and Work, for a regular Week, at Winchester College.*

Subjects of Lessons.	Fourth Form, Junior Division.	Fourth Form, Senior Division.	Fifth Form, Junior Part.	Middle Fifth Form.	Fifth Form, Senior Division.	Sixth Form, Lower Division.	Sixth Form, Upper Division.
	Number of Boys.						
	10	27	27	58	34	19	22
	Number of Hours.						
Bible reading, catechism, and Greek Testament	6	6	2	2	3¼	3¼	3¼
Latin, and Latin repetition	5	5	9	8	4	4	2
Greek and Latin, and Greek repetition	8	8	5	6	6½	10	5
English repetition	1	1	—	—	—	—	—
Arithmetic and mathematics	3	3	3	4	8½	8	7
French	2	2	2	2	—	—	2
English history	1	2	—	—	—	—	—
Grammar paper of questions	—	1	—	—	—	—	—
Geography	—	—	—	—	¾	—	—
	26	28	21	22	23	25¼	19¼

TABLE VI.—*Employment of Time in Lessons and Work, in the Modern School at Marlborough College.*

Subjects of Lessons.	Fourth Form, Lower Division.	Fourth Form. Upper Division.	Fifth Form, Lower Remove.	Fifth Form, Upper Remove.
	Number of Boys.			
	28	21	27	27
	Hours.	Hours.	Hours.	Hours.
Divinity (Books of Kings, Acts, catechism, &c.)	2¾	2½	2	2
Modern history	2	2	2	2
Latin	6	4	3	—
French	6	5¼	6	6
German	1	3	6	6
Geography	1	1	1	1
English composition	1¼	2	2	2
Mathematics	8½	8¼	8	19
Unseen translation	—	—	1	1
Drawing	—	—	—	2
Hindostani	—	—	—	1
Total number of hours in a week	28½	28	31	42

TABLE VII.—*Repetition Lessons of the Sixth Form in Merchant Taylors' School, from June,* 1860, *to June,* 1861.*

SIXTH FORM, TWENTY-SIX BOYS.

June to December, 1860.

REPETITIONS.

Sophocles, Œdipus ..... 250 lines
Cicero, de Amicitia ..... 200 „
Horace, Odes III ..... 1—15
Church of England Articles ..... 1—15

January to June, 1861.

Church of England Articles ..... 16—39
Sophocles, Antigone ..... 250 lines
Cicero, de Amicitia ..... 200 „
Horace, Odes III, 16 to end, and Carmen Sæculare.

* From the Appendix to the Public Schools Commission Report, Table C, Merchant Taylor's School, p. 422.

TABLE IV.—*Table of Public Schoolmen*

Number in Order of Merit.	Age.	Subjects of Examination, July,						
		French.	German.	Mathematics. First Section.	Mathematics. Second Section, and Mixed Mathematics.	English.	History of British Empire.	Modern Geography.
2	17	396	—	1,797	1,031	—	580	620
7	18	673	—	1,674	493	—	255	405
9	18	930	684	1,286	379	—	—	600
11	17	669	—	1,091	44	450	680	—
15	18	694	742	1,276	117	—	230	—
17	17	678	—	918	67	660	—	475
24	18	797	737	1,097	60	—	195	—
25	18	502	—	1,153	613	495	635	655

TABLE V.—*Wellington*

Subjects of Study.	First and Second Forms.	Third Form.	Fourth Form.	Lower Middle Form. Second Division.	Lower Middle Form. First Division.	Upper Middle Form, Second Division, Classical.
	Number of Boys.					
	11	22	32	27	33	33
	Hours of Lessons.					
Divinity	2	2	2	2	2	—
Latin	13	10	11¼	8½	9	6
Greek	—	5	2¾	4½	4½	6
Arithmetic and mathematics	4	4	4	4	4	4
Drawing	1	2	2	2	2	2
Singing	1	1	—	1	1	—
English history	2	—	1	—	2	—
Writing	—	2	1	1	—	—
French	—	—	2	2	2	4
German	—	—	—	—	2	
Geography and history	2	1	1	2	—	—
English	—	—	—	—	2	3
Chemistry	—	—	—	—	—	—
Total of hours	25	27	27	27	30	25

Elected into Woolwich Military Academy, July, 1864.

1864, and Number of Marks.							
Latin.	Greek.	Experimental Sciences.	Natural Sciences.	Drawing. Geometrical.	Drawing. Free Hand.	Total of Marks.	Place of Education.
—	—	645	—	Qualified	—	5,069	Cheltenham College
889	395	—	—	,,	—	4,784	Harrow; Rev. W. H. Pritchett's, Old Charlton, and privately
—	—	—	876	,,	—	4,755	Marlborough College; Rev. G. Frost, Kensington Square
975	779	—	—	,,	—	4,688	Harrow; and Mr. Fleming's, Tonbridge Castle
605	732	—	—	,,	—	4,396	Edinburgh Academy, and Tonbridge Castle
822	693	—	—	,,	—	4,313	Eton, and the Rev. N. Smith, Greenwich
710	488	—	—	,,	—	4,084	Harrow, and Dr. Bridgman, Woolwich Common
—	—	—	—	,,	—	4,053	Elgin Academy, Edinburgh Academy, Kensington School, and Rev. G. Frost, Kensington Square

College, 1862.

Upper Middle Form.			Fifth Form.		Sixth Form and Remove, principally, a Classical Division.	Subjects of Study.
Second Division, Mathematical.	First Division. Classical.	First Division. Mathematical.	Classical Division.	Mathematical Division.		
Number of Boys.						
33	22	22	10	9	27	
Hours of Lessons.						
—	2	$1\frac{3}{4}$	2	$1\frac{3}{4}$	2	Divinity
6	8	7	$13\frac{1}{2}$	5	$15\frac{1}{2}$	Latin
—	5	—		—		Greek
6	4	9	4	10	4	Arithmetic and mathematics
3	2	$2\frac{1}{2}$	$1\frac{1}{2}$	3	1	Drawing
—	2	1	—	—	—	Singing
—	1	3	2	3	1	English history
—	—	—	—	—	—	Writing
5	1	3	3	3	2	French
—	2	2	2	2	2	German
—	—	—	—	—	—	Geography and history
4	—	—	—	—	—	English
1	—	1	—	$1\frac{1}{4}$	—	Chemistry
25	27	$30\frac{1}{4}$	28	29	$27\frac{1}{2}$	Total of hours

TABLE VIII.—*Employment of Time for Lessons, in a regular Week, at University College School, London.*

Subjects.	Number of Classes.									
	I.	II.	III.	IV.		V.		VI.		
	Number of Boys.									
	40	70	70	70		28		26		
	Hours of Lessons.									
Greek	—	—	—	$4\frac{1}{2}$	—	$4\frac{1}{2}$	—	$4\frac{1}{2}$	—	—
Latin*	9	9	9	9	9	9	9	9	9	9
French	6	6	6	3	3	3	3	3	3	3
German†	—	—	—	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$
English	$4\frac{1}{2}$	$4\frac{1}{2}$	$4\frac{1}{2}$	—	$1\frac{1}{2}$	—	$1\frac{1}{2}$‡	—	—	$1\frac{1}{2}$
History	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	—	$1\frac{1}{2}$	—	—	—
Geography	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	—	$1\frac{1}{2}$	—	$1\frac{1}{2}$	—	—	$1\frac{1}{2}$
Mathematics	—	—	—	6	6	6	6	6	6	6
Applied mathematics or mechanics§	—	—	—	—	—	3	—	3	3	—
Arithmetic	3	3	3	3	3	—	$1\frac{1}{2}$	—	$1\frac{1}{2}$	$1\frac{1}{2}$
Natural science, chemistry, and natural philosophy	—	—	—	—	—	$1\frac{1}{2}$	3	$1\frac{1}{2}$	3	3
Social science	—	—	—	—	—	—	$1\frac{1}{2}$	—	$1\frac{1}{2}$	$1\frac{1}{2}$
Writing	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	—	$1\frac{1}{2}$	—	—	—	—	—
Total of hours	27	27	27	$29\frac{1}{4}$	$29\frac{1}{4}$	$29\frac{1}{4}$	$30\frac{3}{4}$	$29\frac{1}{4}$	$29\frac{1}{4}$	$29\frac{1}{4}$
Practical chemistry‖	—	—	—	—	—	—	2	2	2	2

Note.—Extra drawing, four hours for all the classes, with two hours additional for boys learning perspective. May be omitted, or attended for only two hours once a-week.

* Including exercises, &c., composition, grammar, and Roman history.

† May be omitted at the wish of a boy's parent or guardian.

‡ If not learning social science, or may be learnt *vice* history or geography.

§ Instead of mechanics, a boy may learn two other subjects, history and geography, or geography and geology and English = 3 hours.

‖ For such boys as have made special progress in theoretical chemistry, from 25 to 30 boys in the class.

Inconsistencies *of the* English Census *of* 1861, *with the* Registrar-General's Reports: *and* Deficiencies *in the* Local Registry *of* Births.

By William Lucas Sargant, *Author of "Social Innovators," the "Science of Social "Opulence," &c.*

[Read before the Statistical Society, January, 1865.]

I.

The principal conclusions at which I arrive in my present paper are:—

1. That the Census of 1861 is not to be implicitly trusted, but requires further investigation.

2. That the male infants below 1 year old, are underrated by 36,546 or 12 per cent.; and the female infants by 30,831 or 10½ per cent.: that in the second year of life, the deficiencies are 11½ and 11 per cent.; in the third year, 2 and 1 per cent.; and in the first five years taken together, 6¾ and 6 per cent.

3. That this difference of error between male and female infants, is probably owing to the better registration of male births, and not to a worse enumeration of males in the census.

4. That the males and females together, of all ages *under* 20, are apparently underrated by 510,440; but that some considerable deductions have to be made from this number.

5. That the males and females together *of all ages* are probably underrated by more than half a million.

6. That the deficiency in the census is far greater in some districts than in others.

7. That the registration of births is very imperfect in some places: Liverpool and Hull appearing to be the worst; with London, Cheltenham, Plymouth, and Portsmouth, following in order of demerit.

8. That we have but few materials for comparing the Census of Scotland with calculations made from the registers of births; but that as far as we can judge the Scottish Census is as inaccurate as the English one.

II.

The course of my argument will be found carefully epitomized in the "Recapitulation," at pp. 101 to 107.

III.

As to the correction of these errors, I suggest that the census should be taken in future just as it has been taken hitherto, in order that the estimated *rate of increase* may not be disturbed.

Further, I suggest, that it is not too late now to test the last census, by taking a present and elaborate enumeration of the most doubtful towns, beginning with Leicester, and going on to Coventry, Macclesfield, and Nottingham; all of them places of manageable size.

IV.

The calculated death-rate of certain districts is disturbed by this paper. If, *e.g.*, the population of Liverpool parish is one-fifteenth greater than it appears, the death-rate would be, not $\frac{33}{1000}$ as it now stands, but only $\frac{31}{1000}$; a lower rate than the calculated one of Manchester. Again, if the Liverpool births are one-seventh above those registered, the male infant death-rate falls from 240 to 206.

Hull, for the same reasons, would prove to be one of the healthiest towns in the kingdom.

Nottingham also, and other towns, are rescued from the strange position of having deteriorated in mortality, while improving in cleanliness.

V.

Some light is also thrown upon other perplexing topics:—the varying disproportion of the sexes at birth: the difference in that respect between one place and another: the alleged fact that that disproportion is not the same among legitimate and illegitimate children, nor among town and rural populations. In discussing these problems, it has always been assumed that male and female infants have equally been well or ill registered.

Introduction.

In February of last year, in a paper* read before this Society, on the Reports of the Registrar-General, I made some remarks on the relation between the announced death-rate calculated from the *census*, and the death-rate calculated from the registered *births*: and I complained of the exaggeration which represented the deaths under 5 years old as amounting in large towns to half the births.

In order to illustrate this matter, I gave the following case. "If "1,360 new-born infants are placed in an asylum on the same day, "and if their number is reduced by death, in five years, to 1,000, the "quinquennial death-rate is $\frac{360}{1360}$ or $\frac{265}{1000}$; but the mode I condemn "would call the death-rate $\frac{360}{1000}$."

* *Statistical Journal*, vol. xxvii, p. 170.

This case however, does not represent the actual course of events: children really are born daily and die daily. My paper, as I read it to this Society before correcting the proof, gave another illustration. "Suppose an asylum for children under 5 years old: the accommo- "dation for 1,000: the asylum always kept full by the admission of a "new-born infant for every one that died or left on its fifth birth- "day: the rate of mortality that of the table we are considering; *i.e.* "with 365 children dying each year. What is the death-rate in the "asylum? Here are 1,000 living, and 365 die: is the death-rate "$\frac{365}{1000}$? According to the ordinary mode of calculation it certainly "is so."

In the discussion which followed, an objection was raised: it was contended that I had misunderstood my own case: it was said that as a new-born infant was admitted every day, only one of such admitted infants, at the most, would have completed the first year of life, at the end of the calendar year; that the mean age of the children on the 31st of December, would be 6 months; that on the average they would have six months to live in the next year; and that half of their deaths during the first year of life would take place in the first calendar year, the other half in the second calendar year. I stated the true ratio as $\frac{365}{1000 + 365}$: according to my objectors it should be $\frac{365}{1000 + \frac{365}{2}}$.

This second illustration was certainly inaccurate, and I changed it in correcting my proof. I might perhaps, have avoided the blunder, but that I was misled by blunders elsewhere. When the illustration occurred to me, I tested the truth of it by applying it to the vital statistics of England and Wales generally: I calculated the infant death-rate from the registered deaths and the *census;* I modified it by the form I have given $\left(\frac{d}{1000 + d}\right)$; and I found the result nearly the same as the death-rate calculated directly from the deaths and the *births.* I will show presently what blunder of others it was, which neutralized mine, and converted a formula theoretically false into one practically true.

But I now maintain that even in theory, while I was wrong, the objectors were also wrong. *I* said the fraction ought to be $\frac{d}{1000 + d}$ *they* said it ought to be $\frac{d}{1000 + \frac{d}{2}}$: I now assert that it ought to be $\frac{d}{1000 + \frac{2d}{3}}$.

The question is this:—Of 1,000 infants born at a uniform rate, between 1st January and 31st December in any year, as 1859, (*i.e.*

born at about 3 each day) and who die at the rate of 160 in the first year *of life*, how many will die in 1859, and how many in 1860? According to my inaccurate illustration, the whole 160 will die in 1859: according to my censors only 80 will die in 1859: I propose to show that the real number of deaths in 1859 will be about two-thirds of 160, or 107.

Table D.—The opinion that only 80 will die in 1859, is based on the assumption that the deaths are distributed equally over the first twelve months of life: *i.e.*, that there will be as many deaths in 100 children of 11 months old, as in 100 children under 1 month old; an assumption quite unfounded. Table D in the Appendix, gives the proportions for each month, and shows that the deaths will be, during the first month 50; second month 18; third month 13; fourth, fifth, and sixth months together 31; seventh, eighth, and ninth months together 25; and the last three months together 23. Now of the infants born in 1859, at the assumed uniform rate of about three a-day, eleven-twelfths at least will have passed the dangerous first month of life, before 31st December 1859; and though the mean age of the infants on 31st December will be 6 months, the mean risk of death in 1860 will be far less than was the past mean risk of death in 1859.

Table E, is constructed to show what the proportions will be. I assume that 1,000 infants are born daily, and that the deaths during the first year *of life* are $\frac{160}{1000}$. I give below another table which will show the principle of Table E more fully than the table itself does.

1859.					1860.			
	Births.	Time of Exposure.	Age during Exposure.	Deaths.	Number from First Year.	Time of Exposure.	Age during Exposure.	Deaths.
1859.		Days.	Days.		1860.		Days.	
Jan. 1....	1,000	364	1 to 364	160	840	1 day	364	0
„ 2....	1,000	363	1 „ 363	159	841	2 days	363	1
„ 31....	1,000	11 mo.	1 day to 11 mo.	152	848	1 mo.	11 to 12 mo.	8
Feb. 1....	1,000	—	—	—	—	—	—	—
Mch. 31	1,000	9 mo.	1 day to 9 mo.	135	865	3 mo.	9 to 12 mo.	25
June 30	1,000	6 mo.	1 day to 6 mo.	106	894	6 mo.	6 to 12 mo.	54
Sept. 30	1,000	3 mo.	1 day to 3 mo.	80	920	9 mo.	3 to 12 mo.	80
Nov. 30	1,000	1 mo.	1 day to 1 mo.	45	955	11 mo.	1 to 12 mo.	115
Dec. 30	1,000	1 day	1 day	say 5	995	364 days	2 ds. to 1 yr.	155
„ 31	1,000	—	—	—	1,000	12 mo.	0 to 12 mo.	160

On the 1st January 1859, 1,000 are born: on the 31st December they have been exposed to the risk of death during 364 days, and the deaths will have been 160. On the 2nd January another 1,000 are born: on the 31st December they have been exposed to the risk of death during 363 days, and the deaths will have been 159, leaving one death to take place on 1st and 2nd January 1860. The 1,000 born 31st January, will on 31st December have been exposed to the risk of death during eleven months; the deaths during those eleven months will have been 152, and the deaths in January 1860 will be 8.

The reason why the number of deaths will be different in the two years, is that the ages of the children are different. Out of 365,000 children, only 1,000 spend their first day in the year 1860, and 364,000 spend their first day in 1859. Starting from the closing hour of 1859, every day of 1860 adds to the average age; whereas going backwards in 1859, every day diminishes the average age.

In Table E, I have not made my calculations for each *day* of the year 1859; for a table so constructed would take up ten pages of the *Statistical Journal.* I have made my calculations for the average of each *month;* and this corresponds with Table D, which gives the proportion of deaths for each month and not for each day. The result is, that of 365,000 infants born uniformly 1,000 a day, and who die at the rate of 160 in the first year of life, there will die in 1859, 38,426 and 19,974 in 1860: nearly two-thirds to one-third: a proportion very far from half each year.

Let us now see whether by my formula, $\frac{d}{1{,}000 + \frac{2d}{3}}$, we can pass correctly from the death-rate calculated by register of deaths and *census*, to the death-rate calculated by register of deaths and register of *births*.

In 1860 (and indeed in every year), there will be living two classes of infants under 1:—first, those born in 1859: and secondly those born in 1860. On 31st December 1860 indeed, there will be only one class remaining; because the infants born in 1859, will have either died, or passed the limit of one year: the last born in 1859, viz. born 31st December, will, on 31st December 1860, be 1 year old. But the deaths during 1860 of infants under 1 year, will have taken place among both these classes: and if we suppose the same number and uniformity of births in 1860 as in 1859, these infant deaths in 1860, will belong, one-third to 1859, and two-thirds to 1860; or, more exactly (reducing results of Table E to a lower denominator) $\frac{55}{1000}$ will belong to 1859 and $\frac{105}{1000}$ to 1860.

Say then, that a census is taken 31st December 1860. Each 1,000 infants born uniformly during 1860, are reduced to $1{,}000 - 105 = 895$: the deaths during 1860 have been 160: the death-rate will

be announced as $\frac{160}{895} = \frac{179}{1000}$. According to my formula therefore, the deaths to the births will be $\frac{179 \times 1000}{1000 + \frac{2}{3} \cdot 179}$ which is as nearly as possible $\frac{160}{1000}$, as it ought to be.

Inference as to General Death-rate. — A curious consequence follows from these facts. The general death-rate of England and Wales is about $\frac{22}{1000}$: *i.e.*, to every 1,000 persons of all ages left alive at Christmas, 22 have died during the year. What then, on the previous 1st January, was the *expectation of deaths?* It might seem to be $\frac{22}{1000 + 22}$, or something near that; but I believe that this is far from the truth, since this formula takes no account of the births during the year and of the deaths among the children born. The births are about 35 to every 1,000 living (allowing for non-registration): *i.e.*, every 1,000 persons living on 1st January, will become by 31st December, 1,000 + 35 (born) − 22 (died) = 1,013.

The deaths during the year will take place partly out of the 1,000 persons we started with, and partly out of the 35 infants born. Reckoning the infant death-rate at $\frac{143}{1000}$ for both sexes, during the first year *of life*, the deaths out of the 35 infants born at uniform intervals of the year, will be $\frac{2}{3} \cdot \frac{143}{1000} \cdot 35 = 3\frac{1}{2}$ nearly. This leaves $22 - 3\frac{1}{2} = 18\frac{1}{2}$ for the deaths which occur among the 1,000 persons we started with. It follows that while the announced death-rate is $\frac{22}{1000}$, the expectation of deaths is only $\frac{18\frac{1}{2}}{1000}$.

This great difference between the death-rate and the expectation of death, is caused by the great number of births. In England, the increase of population is considerable, as is also the emigration: in France both these are much less. In France therefore, there is far less difference than there is in England, between the death-rate and the expectation of deaths. If, in England, emigration ceased, and the births just equalled the deaths, the difference in question would fall from $3\frac{1}{2}$ to about 2. But to people living, the most interesting question is, what is the expectation of deaths, and not, how many births and consequent deaths are likely to occur. England therefore, has a vital advantage over France, greater than that indicated by the respective death-rates.

The Table E, on which this reasoning is based, assumes that the births in 1860 would be the same as in 1859: but in fact the births must increase as the population and as the emigration increase; *i.e.* from 1 to 2 per cent. each year. I might have constructed another table taking this into account: the difference however, is not enough to render such a tedious addition necessary.

The Census.

For the reasons given above, I am convinced that the formula $\frac{d}{1000 + \frac{2}{3}d}$ furnishes the means of passing from the calculated death-rate to the expectation of deaths, with a sufficiently near approach to accuracy. But as I have before said, the actual application of the formula to the Registrar-General's infant death-rate, does not give us the true expectation of infant deaths, as calculated from *births* and deaths. The incorrect formula $\frac{d}{1000 + d}$ gives more nearly the true expectation. This excites a suspicion that the figures we deal with are wrong; *i.e.* that the register and the census are inconsistent with each other. That the register of births is defective is always avowed, and I shall assign reasons for believing that the census also is defective.

Preliminary Propositions.—It will simplify my task if I start with certain propositions which are essential to my argument.

1st. The registration of deaths may be taken as accurate. There are many reasons why it should be more accurate than the registration of births. Neglect to register a funeral is punishable by a penalty of 10*l.*: there is no penalty with respect to a birth. Then a dead body must needs be disposed of, and the funeral even of a child is a rather grave matter. Burials also, nearly all take place in public cemeteries, and with the services of an undertaker. On the whole it is conceded that there are few failures to register deaths.

Some evidence may be obtained from a comparison of the two decades, 1841-50 and 1851-60: by putting side by side, the average population of the two, and the registered births, marriages, and deaths of the two. The average population is learnt from the Census of 1851 and that of 1861: and though I dispute the accuracy of the latter, I presume it to be as near to the truth as the Census of 1851: the calculated *increase* therefore, may be taken as accurate.

The average population was as follows.

Enumerated in 1841	15,914,148	average 1841-50
„ '51	17,927,609	16,920,879
Enumerated in 1851	17,927,609	average 1851-60
„ '61	20,066,224	18,996,916

Therefore the average population of the second decade, was greater than that of the first, by 2,076,037 or 12¼ per cent. (This differs from the increase in the enumeration of 1861 over that of 1851, which was below 12 per cent.)

We find that the births registered during the first decade,

were 5,488,736. In proportion to the population, the births during the second decade should have been 12¼ per cent. more = 672,370, making 6,161,106. But the births actually registered during the second decade were 6,471,650; showing an excess in the second decade of 310,544. Now we know that the registered births during the second decade were under, and not over, the actual births. It follows, that *if* the births in proportion to population were about equally numerous during the two decades, the registry of births during the first decade was worse by 5·66 per cent. than during the second decade.

2nd. As to marriages:—

There were registered during the first decade.....	1,355,497
Adding 12¼ per cent.....	166,048
The marriages during the second decade should have been	1,521,545
But the number actually registered was	1,601,731
Showing an excess in the second decade of	80,186

Therefore, *if* the marriages in proportion to population were about equally numerous during the two decades, the registry of marriages during the first decade, was worse by 5·91 per cent. than during the second decade.

3rd. As to deaths:—

There were registered during the first decade	3,769,396
Adding 12¼ per cent.	461,751
	4,231,147
But the number actually registered was	4,210,715
Showing a DEFAULT in the second decade of	20,432
(or about ½ per cent.)	

Bringing these results together, we find that *if* during the second decade, the people were, in proportion to their numbers, just as prolific in births, marriages, and deaths, as they were during the first decade, then, during the years 1841-50, the registered births were fewer than they should have been, in comparison with 1851-60, by 5·66 per cent., the registered marriages were fewer by 5·91 per cent., the registered deaths were more by ·54 per cent.

As regards the deaths, there is nothing here to cause any suspicion as to the accuracy of the register. As regards marriages and births, we must conclude that they were very imperfectly registered during the earlier years, unless we afterwards find reasons for believing that there was really an increase in them in proportion to population, during the second decade as compared with the first decade.

II. My second fundamental proposition is, that the Census of 1851 and that of 1861, may be regarded as about equally inaccurate; and that therefore, the calculated rate of increase (11·93 per cent.) may be relied on. I have no conclusive proof to offer; but the same machinery, worked by nearly the same hands, will probably have produced the same results. In particular districts perhaps, there was a good deal of difference, owing to a deterioration of the superintendent here, and a change in the same officer there; but the great number of the districts gives ample room for defect in one place being compensated by excess in another.

III. My third fundamental proposition is, that the registry of *births* from 1851 to 1860, was deficient by $7\frac{1}{2}$ per cent. This proposition rests principally on the statement made in the third volume of the "Census," pp. 5 and 6. The passage is not easily understood.

"The increase of the population of England and Wales since the "last census was 2,174,327. The increase was at the rate of 12 per "cent. in ten years; or, 1·141 annually.

"The emigrants of English origin in the last ten years amounted "to 640,316, which makes the numerical increase since the Census "of 1851 to be 2,814,643. The increase of the emigrants abroad is "probably rapid, and *it may be taken to represent the emigration "reflux.*

"A certain deduction must be made for the Scotch immigrants "who crossed the Tweed and never returned, as well as for "the Irish emigrants who settled in England. The increase "in the ten years of the numbers of the Scotch and Irish in "England was 120,790, which has, however, to be reduced by "the increase of the Englishmen in Scotland and Ireland. The "number of persons in England born abroad increased by "63,429 in the ten years; but this is counterbalanced again "by the increase of Englishmen abroad, exclusive of the recorded "emigrants. If the whole of the increase of the 184,219 persons "in England, born out of its limits, be struck off, the natural "increase recorded becomes 2,630,424; and it is certainly the "minimum to be arrived at by estimate, the true number being "between this and 2,814,643.

"Taking the natural increase at only 2,630,424, the excess of "the registered births over the registered deaths accounts for "2,260,935 of the number, leaving 369,489 children in ten years, or "36,950 annually, who are left unregistered under the Act, which "does not enforce by penalty the registration of births on the "parents or on the guardians of children."

I believe I understand this passage; except indeed, that part which I have put in italics, about an alleged reflux of emigration.

I will put the figures into a form which appears to me more favourable for comparison.

Increase of population by census	2,174,327	Excess of registered births over deaths	2,260,935
Increase by emigration to a distance	640,316	Known as living in England but born abroad	63,429
Increase by emigration to Continent, to Ireland, and to Scotland, say	60,000	Known immigrants from Ireland and Scotland	120,790
*Increase of persons unenumerated in the census	95,000	Probable addition to the two last lines	15,000
		Balance carried forward	509,489
	2,969,643		2,969,643

This balance (509,489) is the estimated number of births unregistered during the ten years 1851-60. The census, in the passage I have quoted, makes the number something between 369,489, and 453,708. My excess is owing to the addition made by the line marked *, and this I will explain.

The writer assumes the census to be accurate; whereas it is certain that there will be errors in an enumeration depending on the co-operation of several millions of heads of families, for the most part imperfectly educated. And it can scarcely be doubted that most of the errors will be omissions; since writers may naturally forget to enter a lodger or a child, but will scarcely trouble themselves to enter fictitious persons. The only question is, how many are omitted. If, as seems probable, these are something like 1 in 20, or 5 per cent., the number omitted in the *increased* population of two millions, will be about 100,000. The exact increase, omitting army and navy abroad was 2,138,615 and 5 per cent. on this number is 106,930: this I have reduced to 95,000 to allow for possible overstatement.

The births registered from 1851-60 were 6,471,650.

The unregistered I have estimated at 509,489, or nearly 8 per cent.; but to keep within the mark I will call this $7\frac{1}{2}$ per cent. (or 485,373).

This then, is my third proposition:—that the actual births from 1851-60 were $7\frac{1}{2}$ per cent. above those registered.

IV. My fourth proposition is, that the actual births during the first decade (1841-50), were $12\frac{1}{2}$ per cent. above those registered; but this estimate is subject to reduction, so far as it can be shown that the number of married women between 20 and 45 years old, was greater in proportion to population between 1851-60, than it was between 1841-50.

I have already given my reasons for assuming that the registry of births was worse by 5 per cent. in the first decade than in the second: nor is it incredible that this should have been the case; since in the years immediately following the establishment of the

register, the habit of communicating each birth to the local office had not been formed even among the educated classes; and the acting registrars had not acquired the skill they now generally possess, of ferreting out the births among the uneducated. But if the deficiency from 1851-60 was 7½ per cent., and the deficiency in the earlier decade was 5 per cent. worse, then that earlier deficiency was 12½ per cent., or 1 in every 8 births.

Tables F and G.—Having laid down these four preliminary propositions, I proceed to explain Tables F and G, both of which have reference to infants under 1 year old: F for males and G for females. The result is this:—that there is a deficiency in the census of 36,000 boys and 31,000 girls, making a total deficiency of 67,000 for *this first year of life.*

The boys omitted are 12 per cent., but the girls only 10½ per cent.; a difference between the sexes not easy to explain. It is highly improbable that parents generally should, in filling up their census papers, be more accurate as to female infants than as to male. But a possible explanation has occurred to me. The deficiency is found by comparing the census with the register of births: the census-enumeration of boys is less than the register would indicate by 12 per cent.; the census-enumeration of girls is less by only 10½ per cent.: this difference however, may be caused, not by a superior accuracy in the *census of girls*, but by a superior accuracy in the *birth-registry* of boys. Suppose, *e.g.*, that 100 boys and 100 girls were born, and none died; and that there—

	Girls.	Boys.
Were registered	98½	100
That the census gave.....	88	88

then the census would be apparently deficient by 10½ girls and 12 boys, simply because the boys had been better registered.

If then, we can believe that boys are better registered than girls, by one or two in a hundred births, the problem is solved. I can believe that boys are better registered to this small extent, and I even think it not improbable that such is the case. For in all parts of the world the birth of a son is more thought of than the birth of a daughter; it being the son who continues the family; whereas the daughter, when she marries, enters into another family: and under our law of primogeniture, backed by the engrained customs of landowners of every rank, the son has precedence over the daughter in succession to realty. It is likely therefore, that boys may to a slight degree be more carefully registered than girls.

Divisions of England and Wales.—These vary a good deal as to apparent inaccuracy: Wales having a deficiency of 18 per cent., but London only 7 per cent. The obvious explanation is, that the superior intelligence of London causes the superiority: but I shall afterwards give reasons for believing, that the census of London is really taken badly; and that the apparent superiority is the result of the inaccuracy of the register of births, by which the census is here measured.

The worst divisions after Wales, are the northern and north-midland, each with a deficiency of 15 per cent.: then Yorkshire, the west midland, and the south midland, with 14 per cent.: after these, the south-western with 13 per cent.; the eastern with 12 per cent.; the south-eastern and north-western with 10 per cent. This is for boys only: the order for girls is nearly the same.

I will now explain how I arrive at these results. It is necessary first, to make the census and the register correspond in date. The census of 1861 was taken on the 8th April: the Registrar-General makes his reports to the 31st December. I deduct from the census the small average growth of the three months between the 31st December 1860 and the 8th of April 1861, amounting to about 3 in every 1,000 persons.

Next, how many infants must there have been living on 1st January 1861? On this day, all those born in 1859 will be over 1 year old; and therefore, we are concerned only with those born during 1860. And the census ought to contain all the children born during 1860, except those who have emigrated or died. The emigration, as I shall hereafter show, is so trifling for this one year of life, that it may be disregarded.

The two questions then, are;—how many infants were born, and how many died of those born. The births we may estimate by adding 6 per cent.* to the register. The deaths are not so easily learnt: because what we want is, the deaths *out of those born during the year;* whereas the deaths registered include those which occurred among infants remaining over from the previous year. Table E however, already explained, enables us to separate these two classes: for it teaches us that of the infants born in 1859, the deaths in the first year of life would take place at the rate of two-thirds in the year 1859, and one-third in the year 1860. If the population were stationary, and the rate of births and deaths were uniform from year to year, we might at once divide the deaths under 1, during 1860, into thirds; and charge one-third to the infants brought over from 1859, and two-thirds to the infants born during 1860. But as the births and deaths are not uniform, we may approximate to the truth,

* I add only 6 per cent., although I might have added 7½ per cent.

by taking all the deaths under 1 during 1860, and deducting one-third of all the deaths under 1 during 1859. (It must be remembered that these deaths during 1859, include the deaths among infants brought over from 1858).

Table F.—I can now explain Table F. Columns 1 and 2 give the names and order of divisions, arranged according to demerit. Column 3 gives the births during 1860. I have added to the register, not $7\frac{1}{2}$ per cent. as might have been expected, but only 6 per cent. All that we know at present, is that during the ten years 1851-60, there were on the average $7\frac{1}{2}$ per cent. of births unregistered: we do not know whether the failure of registration was uniform during the ten years. In constructing my other tables, some reasons occurred for believing that the birth-register was more accurate during 1856-60 than during 1851-55. I have therefore reduced the allowance for non-registration to 6 per cent. during the first five years, and have raised it to 9 per cent. during the second five years. I have thus considerably weakened my argument so far as Table F is concerned.

Column 4 gives the deaths under 1 for 1860, and these I take unaltered from the register. Column 5 gives one-third of the deaths under 1 for 1859, also taken unaltered from the register.

Column 6 gives the number of boys under 1 who must have been living on 1st January 1861, according to the columns 3, 4, and 5: it consists of the births during 1860, minus the deaths out of those births during 1860. Column 7 gives the number of such boys according to the census, corrected to 1st January 1861. If the corrected number of births is accurate (as I presume it is), and if my calculations are accurate, the census would give the same numbers as column 6, within the few hundred children removed by emigration. The actual numbers are:—

Number of boys under 1 year old, living 1st January 1861:—

1. Calculated from births and deaths	333,539
2. Enumerated by the census	296,993
Deficiency of boys in the census for one year of life	36,546

or 12 per cent. If I had added $7\frac{1}{2}$ per cent. to the births, the deficiency would have been nearer 14 per cent.

Now, that there should be some deficiency, is probable, if not certain. We all know that on the 7th April 1861, a printed form was left at every house; and that the head of the family was required to fill this up, before the collector called for it next day. Among the educated classes probably, the process was accurately performed, though I have known cases in which the paper was never returned. But in the worst parts of towns, and in remote

parts of the country, many omissions were inevitable. In such districts, many persons cannot write, and must painfully find a deputy. The large class who write with difficulty, would never add a name, and would often omit one. No man of business would trust his profits to a process so slovenly.

Some of the collectors too, would be overworked, unwell, or indolent. Papers not ready, might be filled up hastily; scattered houses might be overlooked. Then, nearly all the errors would be on one side, that of omission.

I have consulted competent persons, and I find it believed that the census was imperfect. One said, of course it must have been so: another—a clergyman with a large town parish—found his houses greatly underrated, but imagined they might have been set down in another parish: another remembered that there were at the time, several letters stating that certain houses had been overlooked.

On the whole therefore, I can readily believe that the population is far more numerous than it appears to be by the census. Yet writers of the highest reputation assume the accuracy of the census as a matter of course: they take for granted the accuracy of a number ascertained by the operation of counting, performed under the superintendence of legally appointed officers. Mr. Norman, *e.g.*, in his valuable pamphlet on taxation lately republished, says (p. 15), "The amount of population at each decennial period, is "known with great exactness." If Mr. Norman had said that the decennial *increase* is known with *tolerable* exactness, I should have agreed with him. But I am sure that if Mr. Norman were concerned in a grand operation for buying up twenty million sheep, scattered all over England and Wales, he would not be satisfied with one counting, done hurriedly in a single day.

Table G does for girls what Table F does for boys. I have already pointed out, that the deficiency as to girls is only $10\frac{1}{2}$ per cent. for England and Wales, against 12 per cent. for boys. I have also mentioned my conjecture, that this arises from a better birth-registration of boys, and not from any superior accuracy in the enumeration of girls.

This difference is found in every division, though in unequal degrees. The difference for all England and Wales is $1\frac{1}{2}$ per cent.; for Wales and for Yorkshire 3 per cent.; for London, and for the northern, north midland, south midland, west midland, and south-eastern divisions, 2 per cent.; for the north-western, south-western, and eastern divisions, only 1 per cent.; showing 2 per cent. as the difference in a full half of the kingdom, though the small difference in certain large divisions, brings the average down to $1\frac{1}{2}$ per cent.

Emigration.—I promised to give my reasons for disregarding emigration in these two tables. I find that the annual emigrants

from 1851 to 1860, were 64,031.* Of these about one-fourth, or 16,008, were under 14 years old:† and therefore, even if there were as many infants as other children carried out, the annual infant emigrants (under 1) would be little over 1,000; and the deficiency of both sexes in the census would be reduced from 67,377 to 66,233, leaving the percentage about as before.

Tables H and I.—Having convinced myself that the census greatly underrated the number of infants, and desiring to know how far this deficit was the result of misstatement of age, and how far of entire omission, I extended my inquiry to other ages; and the results will be found in Tables H and I. The calculations extend to all ages under 20: and as they are based on the known births, I could go no further; since I am already carried back to the births of 1841, while the Registrar-General's first report is dated only 1838, and during the three first years can scarcely be regarded as trustworthy. The population also naturally divides at 20, with something near the same numbers above and below that age. We must be content to *calculate* up to 20, and to *estimate* from 20 upwards.

The deficiency in the census, on the assumption that the birth-rate in proportion to population was the same in the two decades, was—

Of males	286,844	or 6·3	per cent.
,, females	223,596	,, 5	,,
,, both sexes	510,440	,, 5·6	,,

making a deficiency on the whole population of $5\frac{1}{2}$ per cent. If it were supposed that the deficiency was equally great as to other ages, it would follow that the population of England and Wales was greater than the census made it, by $5\frac{1}{2}$ per cent., or 1,103,630 persons. But many deductions have to be made from this number.

These Tables H and I are constructed on the same principles as the preceding ones; the principal difference being that F and G had reference to infants only, while the present tables have reference to all ages under 20. The first line of H is the same as the first line of F, except that in H an allowance is made for emigration. This however, amounts to only 435 out of a census of nearly 300,000 infants, though in the higher ages it becomes a very considerable matter. The deficiency in boys under 1, is, as I have already stated, 12 per cent.

The second line calculates the deficiency in boys who on 1st January 1861, were over 1 year old and under 2; all of whom must have been born on or after 1st January 1859, and before 1st January 1860; *i.e.* during the year 1859. From this number

* "Census" iii, 6. † Miscellaneous Statistics, "Emigration."

must be deducted the emigration during two years of life, amounting to 870; and also the deaths during two years of life. Part of the deaths during the first year of life, will have taken place during the calendar year 1859, and part during 1860: but we shall be near the mark if we take the whole of the deaths under 1 in 1859. All the deaths in the second year of life, must have occurred in 1860; yet in 1860 some of the deaths registered as in the second year of life, will belong to children born in 1858. I assume that according to the ascertained law in the case of infants, the proportion of these will be one-third: and the proportion is of less importance, because the number of the second year's deaths is moderate, and in each succeeding line still less.

Emigration.—I get at the number to be deducted for emigration, in this way. I learn from the Census (iii, 6) that between 1851 and 1860, the emigrants of English origin amounted to 64,031 a-year. From the "Miscellaneous Statistics" I get the following figures.

Emigration generally.	Over 14 Years.	Under 14 Years.
1855.....	124,313	40,176
'56.....	129,065	31,980
'57.....	161,685	37,238
'58.....	88,266	19,289
'59–61	235,368	47,806
	738,697	176,489
Total	915,186	

The proportion under 14 years is $\frac{176489}{915186} = 19$ per cent. or nearly one-fifth.

Assuming the same proportions for emigrants of English origin only, the annual number of those under 14 would be 19 per cent. of 64,031 = 12,166. I divide these equally into boys and girls, as the known excess of male emigrants must consist principally of adults; and as any default of deduction in this table, will be corrected by an excess of deduction in the next table, of girls. I therefore call the annual emigration of boys $\frac{12166}{2} = 6083$: and distributing these equally among the fourteen years of life, the emigrants for each year of life under 14 will be $\frac{6083}{14} = 435$.

I deduct then, from children in the	first	year of life	.....	435
,,	,,	second	,, ...	870
,,	,,	tenth	,, ...	4,350

i.e., 435 for each year that they have lived.

Column 11 furnishes the calculation made from the preceding figures: it consists of the births minus the deaths and emigration; and this shows what the census *ought* to be. Column 12 gives what the census *is:* column 13 gives the deficiency; and column 13 the proportion which the deficiency bears to the census.

Under Tables F and G, I have already explained that the deficiency in the census for boys under 1 year old is more than 36,000; and that the 435 which I here deduct for emigration, leaves the proportion of deficiency, 12 per cent. It appears therefore, that 1 male infant in 8 has been overlooked by the enumerators.

For the second year of life, the deficiency of boys is 31,500, or $11\frac{1}{2}$ per cent. on the census. But for the third, fourth, and fifth years of life, the deficiency is only 2, $4\frac{1}{2}$, and 3 per cent. respectively; and it seems probable therefore, that the large percentage in the first and second years, is a good deal owing to an incorrect statement of ages, and not to an actual omission of names. I therefore combine all the first five years of life; and I find that the total deficiency of boys under 5, is $6\frac{3}{4}$ per cent. on the census.

The succeeding years are of necessity grouped in fives, because the census gives them in this way.

The deficiency from the 6th to the 10th year, both included, is....					$6\frac{1}{4}$	per cent.
„	11th	„	15th	„	 6	„
„	16th	„	20th	„	 6	„

The total deficiency of males for the first 20 years of life, is 286,844 out of a census of about $4\frac{1}{2}$ millions, or about $6\frac{1}{4}$ per cent. But this is subject to certain deductions, and especially to one, on the ground that probably the birth-rate in proportion to population was higher from 1851-60 than it was in the former decade.

Table 1, of girls,—is constructed in the same way as the last table, of boys. I have already stated as to *infants*, that the apparent deficiency is less as to girls than as to boys; and I have suggested as an explanation, that it is not the census of girls which is better, but the birth-registration of girls which is worse. The same difference is found at other ages.

	Years of Age, under							
	1.	2.	3.	4.	5.	6 to 10.	11 to 15.	16 to 20.
Deficiency in boys, *per cent.*	12	$11\frac{1}{2}$	2	$4\frac{1}{2}$	3	$6\frac{1}{4}$	6	6
Deficiency in girls, *per cent.*	$10\frac{1}{2}$	11	1	3	3	$5\frac{1}{2}$	6	2

The greatest difference between males and females, is at 15 to 20

years of age; caused probably by the habit of young women above 20, of enumerating themselves as under 20. In the census above 20, the numbers would, no doubt, be reduced to the same degree. The falling off in the deficiency of girls, just at the ages we might have anticipated, supplies some confirmation of the accuracy of the tables.

Another line appears, but only appears, to supply confirmation. By the Factory Acts, children under 8 are not allowed to work at all; and under 13 are allowed to work only half-time: parents have therefore, a pecuniary interest in calling their children older than they really are; and they would probably be careful not to contradict in the census return, any lie they have told elsewhere. It is stated by the late Commissioners on Education, that among the miners, the children's ages, in the absence of any proviso for surgical examination, are often overstated. I should therefore, not have been surprised to find the census at 8 and 13 years old, disproportionately large; or what is the same thing, the deficiency of the census disproportionately small. Now at 13 the census both of boys and of girls *is* so disproportionately large, that instead of a deficiency there is an excess. Yet this is a mere casual coincidence: for we do not really know how many of this age were enumerated; as the census tables supply only the whole number between 10 and 14, and the number at 13 is set down roughly in my tables as one-fifth of this.

Again, at 8 years old as compared with 7 and 9, the deficiency is disproportionate: here however, it is not smaller but larger: and there is the same objection as in the former case, from the fact that the census gives the *aggregate* of five years of life, and not the exact number of *each* year of life.

On the whole then, it appears from Tables H and I, that there are deficiencies of numbers in the census, to the extent of 286,000 males under 20, and 228,000 females under 20: being $6\frac{1}{4}$ and 5 per cent. respectively. It appears probable, also, that many women really above 20, are falsely set down as under 20. On the other hand, my tables take no account of the army or the navy, a certain proportion of which consists of boys and youths under 20. Perhaps, these may balance the young women falsely enumerated as under 20. At any rate, if no other deduction were required, we might fairly say that the deficiency in the census up to 20 years of age, was 5 per cent., taking both sexes together: and if we suppose the same omissions among persons of 20 years of age and upwards, the entire deficiency in the census would be more than a million.

But it is probable, that the deficiencies are caused by omissions in filling up the papers, more than by the loss of papers themselves: and that the omissions in filling up are less frequent as to adults than

as to children; since there can be few instances in which the heads of families are forgotten, and these constitute a large proportion of the adults. It is likely therefore, that the omissions of persons above 20 were far less than 5 per cent. Again; my tables are based on the supposition, that the rate of births in *proportion to population*, was the same in the second decade as the first: but I think it probable that the rate of births was higher in the second decade. This supplies another reason for suspecting that the deficiency in the census was less as to persons over 20 years old, than as to persons under 20. If therefore, we even believe that persons under 20 were more numerous by half a million than the census represents them, we shall not infer that the whole population exceeded by more than three-quarters of a million what the census represented them.

Scotland.—I should have been glad to compare these results with similar ones for Ireland and Scotland. But Ireland is only beginning its registration. Scotland has had a registration since 1855; but this is not nearly long enough for my purpose. Still, I can try the first year of life, and see whether the Scottish Census appears deficient like the English, and besides, whether the deficiency is, like the English, unequal in the two sexes.

Making my calculations as I made them for England, and assuming the same failure of 6 per cent. in the registry of births, I obtain the following figures:—

	1 Births 1860, plus 6 per Cent.	2 Deaths under 1, 1860.	3 One-third Deaths under 1, 1859.	4 Calculated Population, viz. Col. 1 minus Col. 2 plus Col. 3.	5 Census Corrected to 1st January.	6 Deficiency.	7 Deficiency per Cent.
Males only	57,674	7,366	2,154	52,462	46,054	6,408	14
Females ,, ...	54,293	6,047	1,687	49,933	44,398	5,535	12½
Both sexes	111,967	13,413	3,841	102,935	90,452	11,943	13

Comparing these with the English figures, we have—

Deficiency in Census:—

	Males.	Females.	Both Sexes.
England	12	10½	11
Scotland	14	12½	13

It results that, on the assumptions I have made, the Scottish deficiency is higher by one-sixth than the English: this however, may be, not because the census is worse, but because the birth-registration is better; and it is alleged that the Scottish registration

is better, in consequence of the infliction of penalties on parents who neglect to register: yet even on the improbable assumption that every birth is registered, the census would still be deficient.

As to the comparison of the sexes, it is remarkable that there should be the same difference in both countries: that in Scotland, as in England, the census deficiency of male infants should be greater than that of female infants, by $1\frac{1}{2}$ per cent. This confirms me in the opinion that the difference is not in the census but in the birth-registration; since it is highly improbable that in both countries the female infants should be better enumerated than the male infants, whereas it is probable that in frequent cases parents should be more careful to register their sons than to register their daughters.

But this argument throws light on the preceding paragraph: for if the argument is sound, it follows that many female births are not registered; and if this be so, if the penalties for non-registration are so far inoperative, it is probable that they may also be so in the case of some male children: we may therefore suppose that all which is accomplished in Scotland by the penalties is to cause a slightly better birth-registration than is found in England.

Table K.—I have extended my inquiry to counties, in Table K, and to towns in Table L, to ascertain whether the census deficiency is locally uniform or variable. As to most ages the flux of population would be an insuperable obstacle: but the migration of infants is comparatively so small that we may disregard it; and the more because its general direction is well known to be from rural districts into towns, and is therefore capable of being allowed for.

I find that while the apparent male infant deficiency in the census is for England and Wales 12 per cent., and for London 7 per cent., it is for Middlesex (extra metropolitan) only $6\frac{1}{2}$ per cent.; Sussex 7; Surrey and Devon, 9; Berks, Lancashire, and Suffolk, 10; Cumberland, Kent (extra metropolitan), and Leicester, 11; Essex, $11\frac{1}{2}$; Cheshire, Hants, Northumberland, Worcestershire, the East Riding, and North Wales, 12; Beds, and Somersetshire, $12\frac{1}{2}$; Gloucestershire and Warwickshire, 13; Derbyshire, Salop, Staffordshire, Westmoreland, and the West Riding, 14; Cambridgeshire, Huntingdonshire, Northamptonshire, Rutland, and Wiltshire, 15; Cornwall and Herefordshire, $15\frac{1}{2}$; Bucks, Hertfordshire, Norfolk, and the North Riding, 16; Dorset, Durham, Lincolnshire, and Oxon, 17; South Wales, 19; Notts, 20; Monmouthshire, 21. These deficiencies are of boys only; and I have not calculated the cases of girls.

In the order of excellence, Middlesex stands at the head: and it may be thought probable that the metropolitan county, when compared with remoter districts, should exhibit a superior intelligence, and a completer organization in taking the census. I will however, give reasons for believing that this superiority is only apparent.

The deficiency, it will be remembered, is calculated, by deducting the deaths from the births, and then comparing the census with the living remainder. The deaths I take as accurate. If the births, with the 6 per cent. I add, are also accurate, then the *apparent* census deficiency is the *real* one. But if, as I believe, the Middlesex birth-register is deficient by far more than the 6 per cent. I add, then the census is also really deficient by far more than the calculated $6\frac{1}{2}$ per cent.

The register of births is not compulsory on parents: among the lower classes, the motives for registering are slight: educated churchmen, and even lawyers, when proving an age, refer to the baptismal register in preference to the records of the Registrar-General: it follows that the accuracy of the register depends on the activity of the working registrar, and is liable to be disturbed by variations in his health and nervous energy. Besides this, in thinly peopled districts, as well as in crowded and squalid ones, there are additional difficulties in the way of the registrar. We may readily believe therefore, that some districts will be more exact than others.

In this case, as in that of the census, nearly all the errors will be on the side of omission: for though, as I understand, a fictitious district register has in one instance been foisted on the authorities, an occasional irregularity of that kind is not worthy of consideration. The difference therefore, between one place and another will be in the greater or less *omissions* of real births.

To estimate these omissions we want to know how many children are actually born in each district. To learn this fact precisely, is impossible; but I believe we may get some approximation to it, by comparing districts similarly situated. We should be far wrong indeed, if we assume that the births in each district are in proportion to population; because the young adults migrate *from* stationary parishes *to* increasing towns. We should be very far wrong if we assumed that the births in each district are in proportion to the marriages; for while in all

England and Wales, the ten years' births to each marriage exceed	4
In Bristol they are below	2
„ Oldham they exceed	6

Careful or negligent registration, cannot account for variations so great. People probably, marry in Bristol and breed outside, whereas they marry outside Oldham and breed within it.

I have therefore adopted the standard used by Messrs. Danson and Welton, in a paper on the Population of Lancashire and Cheshire.* I have taken from the census, the number of married women from 20 to 45 years old, in each county and afterwards in

* "Transactions of the Historical Society of Lancashire and Cheshire."

each town district; and though the fertility of each place will not be exactly the same, yet I think there will be no great difference comparing town with town, or comparing one rural district with another. Judging by the registers as they stand, the births *to marriages* are three times as numerous in Oldham as in Bristol; but the births *to married women* vary far less; the highest county rate being $\frac{358}{100}$ in Durham, against the lowest, which is $\frac{271}{100}$ in Surrey; while even in the town districts the greatest variation is from Bolton at $\frac{349}{100}$ to Hull at $\frac{246}{100}$. A variation of three to one cannot be caused by a difference of registration: a variation of 349 to 246 may.

Turning then, to Column 11 of Table K, we find that the 10 years' registered births to 100 married women of 20–45, are in all England and Wales 299, but in London only 270. Remembering that London here includes places so distant and so rural, as Hampstead and Lewisham, and a population of 2,800,000, we shall hardly believe that the fertility of the married women is much below that of the whole country, though it may be below that found in the very fast increasing counties, as in Durham with 358 births. To bring London up to the standard of the whole country, we must add one-ninth to the births, or 5,600: this will raise the deficiency of the census from 3,054 to 8,654. The deficiency before appeared to be 7 per cent.: it now appears to be no less than 20 per cent. If any one imagines that the prevalence of vice accounts for the fewness of births, I reply that the same phenomenon and the same apparent accuracy of the census, present themselves in that part of Middlesex and that part of Surrey which are outside the London district, and that they present themselves in no other county. I conclude that the London district, together with the remainder of Middlesex and Surrey, are pre-eminent for bad registration and bad census enumeration.

Devonshire comes next in order of demerit, with only 284 births. Raising this number to 299, the deficiency in the census grows from 9 up to 15 per cent.

In other counties the census appears to have been well taken, and at the same time the marriage fertility is at least as high as that of the whole country.

	Apparent Deficiency in the Census.	Registered Births.
England and Wales	12	299
Berks and Suffolk	10	300
Lancashire	10	309
Kent	11	310
Cumberland	11	331

It may be that in some of these cases the registration of births is imperfect, and the census therefore more deficient than it appears: but I have no proof that such is the case.

Going to the other end of the scale, the worst apparent census is that of Monmouth, with a deficiency of 21 per cent. If the birth-rate were low, the census deficiency might probably be even more than this 21 per cent.: as the birth-rate is in fact high, being 314, it is possible that the census was as well taken as in many other counties. It is even possible that the census deficiency was less than 21 per cent.: for in my column 4, I add 6 per cent. to the registered births; and it may be that the Monmouthshire parents do not allow 1 in 16 of their infants to remain unregistered. However, even on the improbable supposition that *every* birth is registered, there still remains a census deficiency of 14 per cent.

Notts is deficient by 20 per cent.: its recorded birth-rate is 309; not a high one for an increasing population: the census must have been badly taken. South Wales is deficient by 19: its recorded birth-rate is 302; not a high one: another example of a census badly taken.

It is impossible generally to assign the shares of imperfection to the census and the register respectively: it is only in extreme cases that we can safely correct one by the other. Where we *know* that the census is imperfect, we may *suspect* that the register is also imperfect, as issuing from the same local offices. But when the census looks unusually accurate, as in the case of London, it may be very inaccurate; and its apparent exactness is no just ground of confidence as to the birth-register. The result of my inquiry is to convince me, that both census and register vary much in the degrees of inaccuracy, comparing one district with another. I greatly desire therefore, to obtain further and more complete information as to both.

Table L.—In Table L, I have done for the towns, what in my last table I did for the counties.

The most remarkable fact here, is that in Liverpool, the census, instead of being deficient, is in excess by about 4 per cent. A person entirely ignorant of the grounds for distrusting these records, might infer that through an excess of immigration over emigration, the infants living in Liverpool were really more numerous than the births minus the deaths.

The true explanation is quite different: it is that the high apparent census is the result of a very imperfect birth-register; for on consulting column 11, we find only 252 births against 299 of all England, and against nearly 350 of Bolton and Wolverhampton. The Liverpool we are concerned with indeed, is only the parish, which is the worst part of the borough: it is a seaport, with a migratory and profligate throng of sailors: it may be conceived

therefore, that the birth-rate would be low, even in proportion to the number of married women. On the other hand I shall show afterwards, in Table N, that comparing this decade with the former one (1841-50), the register of births has fallen off as compared with population, to a degree which strongly confirms the previous condemnation of the recent register. If we raise the birth-rate to anything like that of all England, the census will appear very defective instead of in excess.

Hull, another seaport, comes nearest to this singular position; having a census apparently exact. But here again, is a marvellously low birth-rate: lower even than that of Liverpool, as 246 to 252. If we raise this rate to the ordinary level, the census will appear much below the truth.

Coventry is a remarkable case: the census appears too low by 31 per cent.; the birth-rate is reasonably high, at 315. Leicester resembles Coventry, with a census too low by 30 per cent., and an ordinary birth-rate. Macclesfield and Southampton have both of them a large apparent census deficiency; and Southampton has also a low birth-rate.

As we might have expected, there are greater inaccuracies in this table than in the last; because in a county, an error in one place is divided among the other portions of a large area.

Table M.*—I have another table of the same kind, for some of the London districts; and the results are similar to those of the counties and the towns. As to London generally I have already stated my opinion, that both census and birth-register are inaccurate.

There is a great difference among the sixteen selected districts: two having a census above the calculated number; three having a census apparently correct; and one having a census apparently deficient by 19 per cent.

1. As to the three apparently correct districts:—these are St. James, Westminster; the Strand; and West London. If the registered birth-rate here, were about the normal one of 299, I should think it possible that the census was trustworthy: but in two cases the birth-rate was only 230 and in the third case only 249: and raising this rate moderately, the census becomes very defective.

2. St. Giles is the district with a census apparently deficient by 19 per cent.: the registered birth-rate is 270. Raising this birth-rate to the normal 299, the census deficiency becomes 30 per cent. I cannot however, pretend to assert that the married women of St. Giles would be normally prolific.

3. St. Martin-in-the-Fields has a census apparently too large by 1 per cent: but the birth-rate is only 241; and raising this to the ordinary 299, the census deficiency becomes nearly 25 per cent. As

* See p. 124.

in the case of St. Giles however, I express no opinion as to the probable fertility of the women enumerated in the census as married.

Hampstead is the other district which has a census apparently too large; the excess being 3 per cent. Such a neighbourhood has probably a high *real* birth-rate; I do not mean in proportion to population, but in proportion to married women. The *registered* birth-rate is only 281. I therefore distrust both register and census.

St. George Hanover Square is worth noting. Its birth-rate appears as only 235: the census deficiency of 8 per cent. therefore, ought probably to be raised greatly. On the other hand, a large proportion of the married women may retire to their country houses to be confined.

Some persons may believe that the differences of birth-rate in one district and another, are real, and not results of better or worse registration. Yet I cannot believe that the married women of Bethnal Green are more prolific than those of St. James, Westminster, in the proportion of 294 to 230, a difference of more than a fourth.

I must notice the singularity of Lewisham, where from peculiar causes the birth-rate rose to 424; and yet the census appears nearly correct. But a district which increases by 89 per cent. in 10 years, may be disregarded.

Table N.*—I have sought for more evidence on this perplexed topic, by comparing the town registers of births, marriages, and deaths, during 1841-50, with those during 1851-60. I have already pointed out that the accuracy of the registers depends on the activity of the local officers; and that we may expect to find evidences of occasional laxity, if we put one period by the side of another.

I have previously made this comparison for all England. I have found that the *death*-rate was nearly the same for the two decades; and that the trifling improvement during the second decade was probably the effect of a better sanitary condition. I have found also, that during the second decade, the *marriage*-rate and the *birth*-rate were nearly 6 per cent. higher than they were in the first decade: and I concluded that, on the assumption of a really equal marriage and birth-rate during the two decades, the accuracy of the registers had improved by time.

By making the same inquiry for each town, we may form some notion of the comparative accuracy of the local registration during the two decades. Now in my remarks on Table L, I have argued that the birth-rate of Liverpool was grossly understated at 252 against 299 of all England. If we turn to Table N, we shall find singular confirmation of the opinion, that this birth-register has of late been badly kept. I will therefore explain the table.

* See pp. 122 and 123.

Supposing that the population increased with regularity, while every other element of vital statistics remained stationary, the births, marriages, and deaths, would be proportionate to the average population. I first find the average population of a district, for each of the two decades, and calculate the percentage of increase. If a particular population were 100,000 on the average of 1841-50, and 110,000 on the average of 1851-60, the increase would be 10 per cent. If other elements remained stationary, the births would be 10 per cent. more in the second decade than in the first decade.

In Liverpool, the excess of average population was nearly 10 per cent. Assuming therefore, an unchanged condition in other respects, the registered births during 1851-60 should have been 10 per cent. more than during the previous decade. But instead of this, *they were actually fewer* by 5 per cent.: the number of births registered should have been 104,000; the number was only 90,000.

It is true that I have assumed equality of vital conditions: whereas in fact, there were two alterations; marked sanitary improvement, and a diminution in the rate of increase. It is probable therefore, that the birth-rate was less during the second decade than during the first: but it is highly improbable that the birth-rate should be so reduced that the greater population should absolutely have fewer births by 5,000.

The calculation as to Manchester confirms this opinion. There too, we find both sanitary improvement and a reduced rate of increase. But the registered births, instead of being *absolutely* fewer during the second decade, were more by 14,000: and the birth-*rate* during the second decade exceeded that during the first.

I put a few towns together.

	During Second Decade.	
	Excess of Registered Births.	Deficiency of Same.
	Per cnt.	Per cnt.
England and Wales	5	—
Manchester	5	—
London	7	—
Birmingham	10	—
Brighton	14	—
Gateshead	18	—
Leeds	—	½
Cheltenham	—	11
Liverpool	—	15

I cannot resist these conclusions:—that the registration of Liverpool has been very ill conducted; and that the census of Liverpool, instead of being unusually accurate, was at least as deficient as that taken elsewhere.

As to other towns I will first estimate the correctness of the registration of *deaths*. In columns 15 to 18 I have calculated how many deaths there ought to have been from 1851-60, on the supposition of an unchanged sanitary condition. Judging by this standard, I find that England and Wales registered too few deaths by ½ per cent.: the district of York by the same; London and Macclesfield by 4 per cent.; Manchester, Leicester and Plymouth by 5 per cent.; Salford, Cheltenham, Chester, and Coventry by 6 per cent.; Bristol by 7 per cent.; Bath and Portsmouth by 8 per cent. The greatest of these reductions, about one-twelfth part, indicates a diminution in the death-rate of about two persons to a population of 1,000. But in two other towns the variation was far larger: viz., Liverpool with a reduction of 15 per cent., or 6 to 1,000 of population; and Hull with a reduction of 20 per cent., or 6 to 1,000 of population. We know however, that the sanitary condition of both these towns was far more favourable in the second decade; because the cholera in both of the towns, and the Irish famine also in Liverpool, greatly swelled the lists of deaths from 1841-50.

There are some towns in which the registered deaths *exceed* the calculated number: viz., Bolton and Derby by less than 1 per cent.; Birmingham and Wolverhampton by 1 per cent.; Newcastle-on-Tyne, Stockport, and Sunderland by 2 per cent.; Bradford and Brighton by 3 per cent.; Norwich by 4 per cent.; Blackburn, Gateshead, and Nottingham by 5 per cent.; Yarmouth by 6 per cent.; Sheffield and Southampton by 7 per cent.; Preston by 8 per cent. This last 8 per cent. is equivalent to an increase of the death-rate by 2 in 1,000 of population: *i.e.*, Preston from 1841-50 lost 25 to every 1,000 of population, and from 1851-60 lost 27. These deteriorations may easily be regarded as caused by temporary fluctuations of sanitary condition; and though they caused surprise when I stated them in my paper last year, they did not lead anyone, as far as I know, to question the accuracy of the death-register or of the census. Since that time, further investigation has raised doubts in my own mind: not as to the accuracy of the death-register, but as to the accuracy of the census, by means of which the death-*rate* is calculated.

Marriages.—I will next consider the marriages. Here we might have anticipated great regularity; because we know that the English marriage law has been very strict since the time of George II.; and that no relaxation has taken place by means of the Act establishing the register.

I have already mentioned that for all England and Wales, the registered marriages in proportion to average population, were more numerous in the second decade than in the first by 6 per cent. But

if we expect to find the same variation in each district, we shall be much disappointed.

In Salford from 1841-50 there were only 834 marriages in 10 years, or 83 a-year: from 1851-60, allowing for increase of average population, they should have been 1,029: they were 4,163; or four times as many. In Stockport they were too many by one-half. In Manchester, Bristol, Hull, and Portsmouth, they were too few.

The explanation is simple. In many places, new churches have been built, and new ecclesiastical districts have been formed. In all places, many young people choose to be married in a church outside of their own parish. I have known thousands of such cases. But a change of the incumbent of a church leads sometimes to increased strictness as to publication of banns, and then the stream of marriages is diverted into another channel.

It seems therefore, that we can learn nothing from the columns respecting marriages.

Births.—I now come to the birth columns; and it is for the sake of these that I have discussed the others.

We have seen that the registered deaths throughout England, during the second decade, were fewer by $\frac{1}{2}$ per cent. than they should have been, if the sanitary conditions had been unchanged. The marriages were better registered by 6 per cent., supposing that the real marriage-rate was unchanged: the births were also better registered by 6 per cent., supposing that the real birth-rate in proportion to population was unchanged.

In London, the registered births during the second decade were out of proportion to the population by 7 per cent. In most of the towns in my list, there is also an excess, but in different degrees. In Bolton and Macclesfield it is under 1 per cent.; in Bristol and Yarmouth it is 2 per cent.; in Blackburn $2\frac{1}{2}$; in Plymouth 3; in Stockport 4; in Bradford and Manchester 5; in Preston 7; in Hull 8; in Birmingham, Newcastle-on-Tyne, and York 10; in Sheffield 11; in Coventry and Derby 12; in Nottingham 13; in Brighton 14; in Gateshead and Sunderland 15; in Wolverhampton 18; in Chester 19; in Norwich 23; in Southampton 27 per cent.

If the marriage register for each place could be relied on, we should compare the birth-register with it. As this is not so, the only comparison we can make, is the excess of births and the rate of increase in population. We see that Southampton had an excess of births by 27 per cent.: it was also a fast increasing town. But then, other towns though increasing as fast, had not the same excess of births: while Bristol and Norwich, with a large excess of births, had only a moderate increase of population. Probably therefore, during the first decade, the births were *very* imperfectly registered

in Southampton, Norwich, and Chester, and were imperfectly registered in many other places.

There are on my list only six towns in which the birth-register was proportionately *less* in the second decade than in the first. The falling off was in Leicester ½ per cent.; Portsmouth 1; Salford 2; Bath 8; Cheltenham 11; Liverpool 14 per cent.

The deficiency in the three last towns is large, and also confirmatory of previous inferences: for referring to Table L, we find that in all three, the registered births are very few in proportion to the number of married women; viz. in Bath 264, in Cheltenham 271, in Liverpool 252, against 299 in all England and 343 in Blackburn.

But the case of Liverpool is the most remarkable. It will be remembered that it is the only town in Table L, where the census gives *more* infants than the calculated number; while all England shows a *deficiency* of 12 per cent., and some towns a deficiency of 11, 17, 24, and even 31 per cent. I inferred before, that it was not true that the census of Liverpool was well taken, but that the birth-register of Liverpool was badly kept. The Table N before us, strengthens this conviction of the imperfection of the birth-register: since we find that in the second decade there were 14,000 fewer births registered than there should have been in comparison with the first decade; a reduction quite inexplicable by any circumstances but a laxity of registration.

The difference between Liverpool and Cheltenham is this:— that on the supposition of an accurate birth-register, the census of infants was taken accurately in Liverpool, but was deficient in Cheltenham by 18 per cent.

I contend therefore, that Table N confirms my distrust of register and census: that it shows a great variation in the success of the various local officers: and that whatever may be our estimate of the amount of the census deficiency throughout the country, we must be convinced that there is a large deficiency in certain towns. I do not affect to pronounce what numbers the census ought to have shown: I only maintain that I have established the necessity for a more exact inquiry. Nor will I decide how far the local registrars have failed in their duties: I only press upon the Registrar-General the duty of investigating the proceedings of his subordinates, in places where the registered birth-rate in proportion to married women is much below the ordinary standard, and in places where the second decade shows a great falling off in registered births.

Recapitulation.

In a discussion so perplexed, it is desirable to bring together in a moderate compass, all the arguments I have used.

Table D.—I began this paper by referring to the one I read last year, and particularly to a disputed question as to the mortality of infants. The question is this. Assume that of 1,000 infants born in 1860, there die 160 during the first year of *life;* also that the births occur at regular intervals during 1860: how many will die between the 1st January and the 31st December 1860? On the 31st December 1860, these infants have on the average been exposed to the risk of death during six months, and have on the average to be exposed, during 1861, to the risk of death during six months more. It has been erroneously inferred, that there would be 80 deaths during 1860, and 80 during 1861. The mistake is founded on the supposition that the rate of mortality would be the same in 1860 and in 1861. Now in 1861, no infant is exposed to the risk of death during its first day, but in 1860 all the infants are so exposed: in 1861 very few are exposed during the first week, but in 1860 nearly all are so: in 1861, only a few are exposed during the first month, but in 1860 the greater part are so. The most dangerous portions of life are passed in 1860; and therefore the deaths will be more than 80 in 1860, and less than 80 in 1861.

Table D proves that out of 160 deaths in the first year of life, the first month has 50, the second month 18, and the last month 7.

Table E.—In my next table, I calculate *more exactly*, how many of the 160 deaths would occur in 1860 and how many in 1861: I find that the proportions would be 105 and 55, or very nearly two to one. About two-thirds of the 160 deaths will take place in 1860.

By means of this proportion we can pass from the death-rate of the Registrar-General, to the death-rate calculated from the births. The death-rate of the Registrar-General is the proportion of deaths to infants *left alive:* the other death-rate is the proportion of deaths to *births*. Suppose 179 have died and 1,000 are left alive; the Registrar-General's death-rate is $\frac{179}{1000}$; the other death-rate is $\frac{179}{1000 + \frac{2}{3} \cdot 179} = 160$ (nearly): so that if in a particular place, 179 infants under 1 have died and 1,000 remain alive, we may conclude that out of 1,000 born 160 die in the first year of life.

But when I apply this formula to the Registrar-General's death-rate, and compare the result with that calculated directly from the births and deaths, I find a marked disagreement: I discover that the *inaccurate* formula $\frac{179}{1000+179}$, gives a result much nearer the truth. I infer that the Register and the Census cannot both be right.

I proceed to inquire where the errors are. In doing this, I take the following propositions as my basis.

1. The registry of deaths may be regarded as accurate.

2. The Census of 1851 and that of 1861, were probably taken with about equal care and accuracy.

3. The register of births during the second decade (1851-60), was deficient *on the average* of the country by $7\frac{1}{2}$ per cent.

4. I give reasons for an opinion that the register of births during the first decade, was deficient on the average by $12\frac{1}{2}$ per cent.; or by 5 per cent. more than during the first decade. But this is subject to the question whether the real birth-rate in the second decade was not higher than that in the first decade.

Tables F and G.—Having laid down these four fundamental propositions, I proceed to show that in the last census, there were the following omissions of infants under 1 year old,

Boys	36,000	or 12 per cent.
Girls	31,000	„ $10\frac{1}{2}$ „
	67,000	

I arrive at these figures by ascertaining the number born in 1860, and deducting the proportion of those who died in 1860. (Not deducting all the deaths under 1 during 1860, but about two-thirds of these). The resulting number is, as I mention above, 67,000 above the census number. The possible emigration is so small that it may be disregarded.

The calculation is so simple, that I can hardly doubt the deficiency of the census to be very large. It is not uniform in the great divisions of the country; but amounts apparently to 18 per cent. of boys in Wales, and to only 7 per cent. in London: though I afterwards assign reasons for believing that the London deficiency is much higher, through great irregularities in registering the births.

After explaining the construction of these Tables F and G more in detail, I go on to argue that from the rapid way in which the census must be taken, errors are inevitable; and that these will be generally on the side of omission; especially on the part of the most numerous classes, because they write with difficulty, or trust to neighbours who are equally inexpert. Some papers also, are overlooked: and allowing for these, the omission of one infant in a hundred families is all that is required; besides that some infants in their first year, are put down as 1 year old.

The fact that the apparent deficiency of boys is 12 per cent. and of girls only $10\frac{1}{2}$ per cent. (a difference found also in Scotland) I explain conjecturally. The deficiency is found by comparing the birth-register with the census. Any circumstance which swells the birth-register, increases the apparent deficiency. But it is probable that parents are in many instances more careful about the registering of boys than of girls: whereas it is absurd to suppose that they

are more careful in enumerating female infants than male infants; and this both in England and Scotland.

Tables H and I.—My calculation so far, having been simple, and as I think conclusive, I am led to extend my inquiry to other ages. The registers enable me to reach all persons under 20; *i.e.*, nearly half the population.

The results are these (on the supposition that the real birth-rate was the same in the first and second decades) :—that the census deficiency among all persons from birth to under 20 years old, was 515,278, or more than $5\frac{1}{2}$ per cent.; and that if we assume the same circumstances for the population above 20 years old, the total census deficiency would be 1,100,000. There are reasons however, for reducing this number considerably. First, I do not think it true that the real birth-rate was as low in the second decade as in the first; because I find that in the second decade there were, proportionately to population, more married women from 20 to 45 than there were in the first decade. Secondly, the census population which I have dealt with, does not include the army and navy, and such of these as are under 20 ought to be subtracted from the deficiency.

Ireland and Scotland.—Ireland has only lately had a register.* That of Scotland is too recent to teach us much: but by comparing it with the census, we learn that the enumeration of infants under 1 is more defective than in England. This however, is subject to the doubt whether the Scottish birth-registration, though lately begun, and applied to a rather scattered population outside the towns, is not more complete than the English. I have added 6 per cent. for omissions as in England: possibly this is too much.

There is the same comparative difference between boys and girls, as in England: the deficiency in boys being 14 per cent., and the deficiency in girls $12\frac{1}{2}$ per cent. I presume that in both countries, this difference is caused by a superior registration of boys, and not by a superior enumeration of girls.

Table K. *Counties.*—Of the previous tables, three have reference to all England and Wales; two to the eleven great divisions of England and Wales. My next table, K, has reference to each county separately; reckoning London, North Wales, South Wales, and the three Ridings, each as a county. The investigation is confined to infants under 1 year old, to avoid the disturbance caused by migration and emigration. I take the case of boys only.

I find that the apparent census deficiency varies greatly; being for Middlesex (extra metropolitan) only $6\frac{1}{2}$ per cent. (something less than for London); and going up to 20 per cent. in Notts, and 21 per cent. in Monmouthshire.

* See the Quarterly Tables in this and the preceding number of the *Journal.* —ED. *S. J.*

But I give reasons for believing that further investigation is necessary. I measure the census by the births minus the deaths of the year 1860: the deaths I take as accurately registered: the births for all England and Wales in 1860, I estimate to be inadequately registered by 6 per cent.; but it is improbable that the imperfection should be uniform thoughout the counties.

I tried three modes of correcting the birth-register: 1, a comparison of births with marriages; 2, a comparison of births with population; 3, a comparison of births with married women from 20 to 45 years old: a notion I borrowed from Messrs. Danson and Welton. The two first I found useless: I adopted the third mode.

The number of registered births during the second decade, to 100 married women from 20 to 45 years old, was for all England and Wales nearly 300 (299); for London only 270; for Durham so high as 358. I suspect therefore, that the birth-register is very ill-kept in London: and I am confirmed in this opinion by Table L, where I find that great towns had generally a registered birth-rate above, and not as London, much below, that of all England: nor can I admit the corruption of a great metropolis as an explanation of a rate so low as 270, when I find that the extra metropolitan parts both of Middlesex and of Surrey are all but as low in the register (273 and 271). I have therefore, little doubt, that both the birth-register and the census of London are defective. I equally suspect those of Middlesex and Surrey (extra metropolitan); and I regard those of Sussex and Devon with much suspicion.

I am not so clear about other counties, because their birth-register is not so low as to be certainly wrong. But Table K on the whole, confirms my doubts as to the accuracy both of register and census.

Table L—does for the towns, what Table K has done for the counties. The most remarkable cases in it are those of Liverpool and Hull, where the census appears about correct, but where the registered birth-rate is so low as to be untrustworthy; and where therefore, the accuracy of the census is only apparent. Coventry on the other hand, has a census of great apparent incorrectness: nor can I believe that a town in a state of chronic distress, possessed on the 1st January 1861, more infants than were born there.

Table M—which goes through the same process for several districts of London, leads me to the same conclusions that I arrived at before.

Table N.—These suspicions are of so grave a character, that I have felt bound to use other means to test the grounds on which they rest. I have therefore made a comparison of some of the registers of the two decades; and I have preferred the town districts as being each under the superintendence of one registrar. If we find

that in certain towns, the number of registered births has not increased in anything like proportion to the increase of population, and if these are the very towns which we before suspected of an imperfect registry, we shall have a confirmation of our ill-opinion of the local officers.

I have before made this comparison for all England: I have shown that comparing the two decades, the registered death-rate was nearly the same; 2nd, that the registered marriage-rate was higher in the second decade by about 6 per cent.; 3rd, that the registered birth-rate was higher in the second decade by about 6 per cent. I have framed my tables on the supposition that the increase of registered marriage-rate and birth-rate was merely the result of better registration: because the population did not increase faster in the second decade than in the first, as it should have done if more births, and no more deaths, had occurred; and because the emigration records do not* enable us to say that more persons of English origin left the country in the second decade than in the first. I have however, found that at the close of the second decade, there were in proportion to the whole population, more married women from 20 to 45 years old than there were at the close of the first decade: and this has modified my opinion, and has led me to suspect that the omissions in the census are more numerous among persons under 20 years old than above that age; and more numerous still among children.

I now make this comparison for the towns separately. If my previous opinions are to be confirmed, we ought to find that the registered birth-rate of Liverpool was worse in the second decade than in the first. This really was so, and the difference was very large. During the second decade, the registered births were fewer than the calculated number, by no less than 14,000, or 15 per cent. It is possible that the real birth-rate was lower, because the rate of increase of the population had diminished: but as we find no other town with such a falling off of births, and no other *great* town with any considerable falling off, we must believe that the main difference was one of registration.

In most instances there was an *increase* in the registered birth-rate during the second decade.

Manchester had an increase of	.....	5	per cent.
Birmingham	„	10	„
Nottingham	„	13	„
Chester	„	19	„
Southampton	„	27	„

* Merivale's "Colonization," p. 165.

Whereas—

Liverpool *fell off* by	.....	15	per cent.
Cheltenham „	.....	11	„
Bath „	.....	8	„
Salford „	.....	2	„
Portsmouth „	.....	1	„
Leicester „	.....	½	„

Table N therefore, confirms my opinions, that the birth-register is not to be implicitly trusted; and that its inaccuracy is in some towns very great.

Inference.—I infer from this tedious inquiry, that there are grounds for seriously doubting the accuracy both of birth-register and of census. But I do not conceive that we ought to rest satisfied with these suspicions. We have been accustomed to regard the census as accurate, and the birth-register as uniformly inaccurate within certain known limits. If I have really shown reasons for suspecting that the census is generally inaccurate, and very much so in particular places; and if my suspicions are well founded as to the birth-register of particular places, we ought not to stop here: but we ought to consider whether there exist any means of satisfying our doubts, and of either amending these documents, or of restoring our confidence in them if they require no amendment.

Remedies. Birth-register.—The Registrar-General has always lamented his want of power to enforce the registration of births. I hope this paper may supply him with additional arguments in favour of his demand for penalties on negligent parents. As regards particular districts, if he shares my suspicions, he has, no doubt, the means which are open to all superior officers, of investigating the proceedings of subordinates.

The amendment of the census is not so easy. No new penalties, and no enforcement of penalties, would be of much avail. Births are taking place every day, in every street: one penalty enforced, would awake a whole neighbourhood; and the habit of registering once formed, would easily be kept up. But the census comes only once in ten years, and penalties levied in 1861, would be forgotten by 1871.

The employment of two sets of enumerators has been suggested. I fear that the result would be inextricable confusion. The errors arise from the rapidity of the process, and from the inaccuracy of parents. The rapidity is necessary with a population like ours, which travels much: the inaccuracy can be only slowly mitigated, by an improvement in education. It has to be remembered too, that what we want to know, is more the rate of increase than the absolute numbers; and that any considerable improvement in accuracy, would vitiate the comparison of different periods. If

we could satisfy ourselves of the degree of inaccuracy, we could then add the omitted numbers.

I recommend that the next census should be taken as the last was: that tables such as my K and L, should be constructed immediately afterwards; and that the suspicious returns should be reinvestigated at once, by persons going round with the papers which had been filled up and returned. With the original depositions in their hands, these visitors would easily judge the cases, and determine what omissions had been made. At the same time, they might test the register by inquiring what births had taken place during the ten years.

It is not too late even now to do something with respect to the Census of 1861; for the apparent deficiency is in some instances so large, that any probable increase of population in four years, might be safely allowed for. There is Leicester, *e.g.*, with only 68,000 souls enumerated in 1861: where, if the enumeration of people generally was as deficient as that of infants, the numbers ought to be 88,000; and where at any rate it must probably be far above 68,000. The recorded rate of increase was only 12 per cent.; and whether this was 12, 15, or 20 per cent., an approximate allowance might be made for it. Cheltenham, Coventry, and Macclesfield, are also of moderate dimensions, and apparently much underrated. The new census might be tried first in these smaller places: afterwards, if anything important accrued, it might be extended to Nottingham, Leicester, Hull, and Liverpool.

Inferences as to Rates of Mortality:—If the Census of 1861 was really as inaccurate as it appears, then the death-rates were different from those at present calculated. The death-rate of any place is commonly stated to 1,000 of population; and is

$$\frac{\text{the No. of deaths} \times 1000}{\text{Population enumerated}}.$$

But if the population is really greater than that of the census by 5 per cent. (suppose), the death-rate falls by about 5 per cent., and the national death-rate falls from $\frac{22{\cdot}24}{1000}$ to $\frac{21{\cdot}18}{1000}$.

But in particular districts the difference might be far greater. Liverpool parish from 1851-60, had an apparent death-rate of 33; but if we can imagine its population to have been greater by one-fifteenth than the census makes it, the death-rate will have been only 31, a lower one than that of Manchester. Then as to infant mortality, the scandal is mitigated: for if we suppose the births to have been one-seventh more than those registered, the death-rate of infants under 1 falls from $\frac{240}{1000}$ to $\frac{206}{1000}$, which is about that of the other Lancashire towns. Even the death-rate of children under 5 is lessened; being reduced from $\frac{467}{1000}$ to $\frac{400}{1000}$, a

rate frightfully high, yet very far from that $\frac{500}{1000}$, or one-half, which inaccurate philanthropists will attribute to large towns generally.

Hull by a similar correction, might come out as a healthy town.

Light is also thrown on the perplexing fact, that some towns have failed to improve in health, or have even deteriorated, notwithstanding a large outlay on sanitary improvements. Nottingham, *e.g.*, has drained and cleansed itself; and yet the recorded death-rate of the second decade was higher than that of the first. But judged by Table L, the 1861 Census of Nottingham was inefficiently taken; and if that of 1851 was better taken, the mortality may have really diminished.

Inference as to the Disproportion of Male and Female Births.—Some evidence offers itself as to the proportionate numbers of births in the two sexes. These have always seemed to vary greatly in different counties; and it has been taken for granted that the birth-registers are everywhere to be trusted for this comparison: but if we believe that in England and Scotland the boys are better registered than the girls, we shall be disposed to inquire whether there is the same distinction elsewhere; and we shall cease to wonder that the births of boys to those of 100 girls are stated at 104 in one country and at 106 in another.* Our doubts will be increased by the example of Scotland; where we find the Registrar reporting,* that the boys' average births were to the girls as $\frac{105}{100}$; but that while in the mainland rural districts they were 106, only $103\frac{1}{2}$ were found in the towns. As the same difference between town and country has been found in other parts of Europe, an ingenious Frenchman has suggested that a physical deterioration of the town parents may cause an excess of female births. But it is far more likely that the difference is one of registration; and that the better registration of boys occurs most in the rural districts, where succession to real estate is more in parents' thoughts.

Inference as to Disproportion among the Illegitimate.—Another problem may perhaps be solved. It has been noticed in Prussia, that among illegitimate children, there is not the same disproportion of the sexes that there is among legitimate children:† *i.e.*, that proportionately, illegitimate children have more females among them than legitimate children have. The same is true of France, while in Scotland the reverse has been observed. After all, may not the difference be one of registration? In Prussia, may not mothers be more solicitous about the registry of legitimate boys than of illegitimate ones? or more solicitous about the registry of illegitimate girls than of legitimate ones? Or, in the Islands of Scotland, may not the hope of a subsequent declaration of marriage, make mothers

* "Annals British Legislation," 67, 182 (358).

† *Statistical Journal*, vol. xxiii, p. 302, and vol. xxv, p. 244.

unusually exact in the registry of illegitimate boys? These facts should be carefully ascertained before further discussion is allowed of the causes of the alleged phenomena.

Inference as the extent of Illegitimacy.—Our knowledge of the numbers of illegitimate children, is derived from the Registrar-General's reports. I mentioned in a former paper, the assurance I had received from two very competent registrars, that the mothers of illegitimate children are careful in registering the births, as a supposed evidence of paternity. Nevertheless, most persons look with suspicion at the returns which make the base-born in London fewer in proportion than those of the whole country. There was indeed, a paper lately presented [22nd February 1861 (55)] to the House of Commons,* which shows that the summonses in bastardy from 1845 to 1859, were fewer in the whole of Middlesex than in any other county except Cornwall; and far fewer than in most other counties. It would be more satisfactory however, to obtain a trustworthy registration of Middlesex births generally.

In conclusion, I must beg not to be misunderstood as to the value I set on the calculations I have made. I have a high respect for the legal rule, that every case must be supported by the best evidence obtainable. The best evidence in the case of the census, is a fresh enumeration of suspected districts: the best evidence in the case of the birth-register, is a close investigation of the proceedings of the local registrars in districts where the fruitfulness of married women appears unusually low. All that I claim to have done, is to have raised so strong a presumption of error both in census and register, as to call for careful inquiry.

NOTE.—The census contains such a multitude of particulars, that it is unavoidably complex; and it is not easy to find any information required. A more elaborate index would be of great service. A town should be mentioned in every place where it occurs. I know a case in which a person desired to ascertain the number of children in Bath under 1 year old: after searching diligently he gave up the inquiry. A fuller index would have taken him at once to what he wanted.

Another trifling addition would be highly valuable. The most extraordinary feature of our modern population, is the growth of the towns: in less than a hundred years, the three greatest English towns (after London), have increased at least tenfold. Inquirers therefore, often want to trace the growth from 1801 to 1861; but they find that while the *county* census is given for each enumeration (I, xiv), the same thing is not done for the *towns*, nor even for the principal of them. To find the growth of Liverpool or Leeds, we must turn over half a dozen volumes.†

* "Annals British Legislation," 52, 166 (102).

† I find that this information is given in the third volume, p. 103. I trust that in 1871, it will be found in its right place, among the "Summary Tables" at the beginning of the first volume.

APPENDIX.

I have headed these Tables D to N, to follow the Tables A to C of my paper printed last year in *Statistical Journal*, vol. xxvii, p. 170.

TABLE D.—*Calculation of the Number of Male Infants who Die during* EACH *of the First* TWELVE MONTHS *after Birth, assuming that* 160 *Die during* ALL *the Twelve Months. Registrar-General*, iii, 59.

	Number of Months.	Total Deaths.	For each Month.	Proportion for each Month of Life.	Proportion out of a Total of 160.
				Per cent. of whole.	
Under 1 month	1	13,274	same	31·01	50
Over 1 and under 2 months	1	4,782	„	11·17	18
„ 2 „ 3 „	1	3,521	„	8·23	13
„ 3 „ 6 „	3	8,344	2,781	6·50 (6·50) (6·50)	31
Over 6 and under 9 months	3	6,717	2,239	5·23 (5·23) (5·23)	25
Over 9 and under 12 months	3	6,162	2,054	4·80 (4·80) (4·80)	23
	12	42,800	—	100·	160

Note.—Out of 42,800 deaths during one year, of infants under 1 year old, the deaths in the first month are 31 per cent. or nearly one-third.

TABLE E.—*Calculation of the Number of Male Infants who Die in the First and Second* CALENDAR *Years respectively, out of those Born during the First Calendar Year, at the Rate of* 1,000 *a-day; on the Supposition that* 160 *Die during the First Year* OF LIFE.

Date of Births (inclusive).	First Year.					Second Year.			
	Births.	Average Time during which Exposed.	Average Age during Exposure.	Deaths per 1,000.	Aggregate Deaths.	Average Time during which Exposed.	Average Age during Exposure.	Deaths per 1,000.	Aggregate Deaths.
		Months.	Months.			Days.	Months.		
Jan. 1 to 15	15,000	$11\frac{3}{4}$	0 to $11\frac{3}{4}$	158	2,370	7	$11\frac{3}{4}$ to 12	2	30
						Months.			
Jan. 16 to Feb. 14	30,000	11	0 „ 11	152	4,560	1	11 „ 12	8	240
Feb. 15 „ Mch. 15	29,000	10	0 „ 10	144	4,176	2	10 „ 12	16	464
Mch. 16 „ Apl. 15	31,000	9	0 „ 9	136	4,216	3	9 „ 12	24	744
Apl. 16 „ May 15	30,000	8	0 „ 8	128	3,840	4	8 „ 12	32	960
May 16 „ June 15	31,000	7	0 „ 7	120	3,720	5	7 „ 12	40	1,240
June 16 „ July 15	30,000	6	0 „ 6	112	3,360	6	6 „ 12	48	1,440
July 16 „ Aug. 15	31,000	5	0 „ 5	102	3,162	7	5 „ 12	58	1,798
Aug. 16 „ Sept. 15	31,000	4	0 „ 4	91	2,821	8	4 „ 12	69	2,139
Sept. 16 „ Oct. 15	30,000	3	0 „ 3	80	2,400	9	3 „ 12	80	2,400
Oct. 16 „ Nov. 15	31,000	2	0 „ 2	67	2,077	10	2 „ 12	93	2,883
Nov. 16 „ Dec. 15	30,000	1	0 „ 1	50	1,500	11	1 „ 12	110	3,300
Dec. 16 „ Dec. 31	16,000	—	0 to 7 days	14	224	$11\frac{3}{4}$	7 dys. to 12 m.	146	2,336
	365,000	7 days	$\frac{38426}{365\text{ m}} = 105$	1,354	38,426	—	$\frac{19974}{365\text{ m}} = 55$	726	19,974

ABLE F.—*Apparent Deficiency in the* 1861 *Census, of* MALE *Infants under One Year Old; in each of the Eleven Divisions of England and Wales. No allowance is made for Emigration or Immigration.*

1 Order of emerit.	2 —	3 Births, 1860, plus 6 per Cent.	4 Deaths under 1, 1860.	5 One-third Deaths under 1, 1859.	6 Calculated Population viz., Column 3 Minus 4 Plus 5.	7 Census to 1st January, 1861.	8 Deficiency.	9 Rate per Cent. of Deficiency.
—	England and Wales	370,787	56,892	19,644	333,539	296,993	36,546	12
1	Wales & Monmouthsh.	24,074	3,305	1,109	21,878	18,592	3,286	18
2	North-Midland	24,194	3,850	1,428	21,772	18,812	2,960	15
3	Northern	22,982	3,261	1,121	20,842	18,198	2,644	15
4	South-Midland	23,344	3,627	1,269	20,986	18,394	2,592	14
5	York.....	39,899	6,678	2,222	35,443	31,102	4,341	14
6	West-Midland.....	47,280	7,301	2,629	42,608	37,483	5,125	14
7	South-Western	31,021	4,066	1,455	28,410	25,132	3,278	13
8	Eastern	19,745	3,071	1,105	17,779	15,783	1,996	12
9	South-Eastern.....	30,567	3,935	1,371	28,003	25,393	2,610	10
10	North-Western	57,178	9,897	3,347	50,628	45,969	4,659	10
11	London	50,503	7,901	2,588	45,190	42,135	3,055	7
		370,787	56,892	19,644	333,539	296,993	36,546	—

ABLE G.—*Apparent Deficiency in the* 1861 *Census, of* FEMALE *Infants under One Year Old; in each of the Eleven Divisions of England and Wales. No allowance is made for Emigration or Immigration.* (*Same as* F, *but for Females.*)

1 Order of emerit as to Males.	2 —	3 Births, 1860, plus 6 per Cent.	4 Deaths under 1, 1860.	5 One-third Deaths under 1, 1859.	6 Calculated Population, viz., Column 3, Minus 4 Plus 5.	7 Census to 1st January, 1861.	8 Deficiency.	9 Rate per Cent. of Deficiency.
—	England and Wales	354,304	44,092	15,566	325,778	294,947	30,831	10½
1	Wales & Monmouthsh.	23,050	2,610	890	21,330	18,612	2,718	15
2	North-Midland	23,216	2,804	1,090	21,502	18,963	2,539	13
3	Northern	21,966	2,638	934	20,262	17,938	2,324	13
4	South-Midland	21,907	2,680	979	20,206	18,062	2,144	12
5	Yorkshire.....	37,996	5,236	1,719	34,479	31,018	3,461	11
6	West-Midland.....	45,161	5,596	2,063	41,628	37,100	4,528	12
7	South-Western	29,764	3,078	1,148	27,834	24,866	2,968	12
8	Eastern	18,926	2,379	845	17,392	15,599	1,793	11
9	South-Eastern.....	29,056	3,034	1,126	27,148	25,164	1,984	8
10	North-Western	54,746	7,669	2,701	49,778	45,523	4,255	9
11	London	48,516	6,368	2,071	44,219	42,102	2,117	5
		354,304	44,092	15,566	325,778	294,947	30,831	—

TABLE II.—*Apparent Deficiency in the 1861 Census,*

1	2	3	4	5	6	7	8
	Registered Births.			Deaths.			
Year of Life.	—	Plus 6 to 13 per Cent.		—	Year of Age.	—	Emigration.
0	1860	6	370,786	1860	0	56,892	435
1	'59	—	373,822	1859–60	0 and 1	76,229	870
2	'58	—	355,287	'58–60	0 to 2	84,751	1,305
3	'57	—	360,398	'57–60	0 „ 3	91,122	1,740
4	'56	—	355,674	'56–60	0 „ 4	91,182	2,175
5	1855	9	353,116	1855–60	0 to 5	92,735	2,610
6	'54	—	353,236	'54–60	0 „ 6	93,548	3,045
7	'53	—	342,002	'53–60	0 „ 7	97,742	3,480
8	'52	—	347,766	'52–60	0 „ 8	99,498	3,915
9	'51	—	343,314	'51–60	0 „ 9	98,416	4,350
10	1850	11½	337,659	'50–60	0 to 10	92,713	4,785
11	'49	—	329,099	'49–60	0 „ 11	94,511	5,220
12	'48	—	321,505	'48–60	0 „ 12	91,987	5,655
13	'47	—	307,357	'47–60	0 „ 13	95,009	6,090
14	'46	—	326,857	'46–60	0 „ 14	101,755	6,525
15	1845	13	314,612	1845–60	0 to 15	96,102	7,525
16	'44	—	313,502	'44–60	0 „ 16	95,162	8,525
17	'43	—	305,752	'43–60	0 „ 17	93,176	9,525
18	'42	—	299,680	'42–60	0 „ 18	94,097	10,525
19	'41	—	296,866	'41–60	0 „ 19	93,121	11,525
—	—	—	—	—	—	—	—

Note.—In column 8, the emigration is estimated, without any deduction for immigration,

of MALES *in the First Twenty Years of Life.*

9	10	11	12	13	14	15
One-third of Deaths.		Calculated Population, viz., Column 4 Minus 7 and 8 Plus 10, to 1st January, 1861.	Census to 1st January, 1861.	Deficiency.	Proportion per Cent. of Column 13 to Column 12.	Totals.
Year of Age.	1859.					
0	19,644	333,103	296,993	36,110	12	Per Cent.
1	6,348	303,071	271,548	31,523	11½	
2	3,230	272,461	267,478	4,983	2	$\frac{91,378}{1,350,845} = 6\frac{3}{4}$
3	2,169	269,705	258,260	11,445	4½	
4	1,566	263,883	256,566	7,317	3	
5	710	258,481	233,889	24,592	—	
6	710	257,353	same	23,464	—	
7	710	241,490	,,	7,601	—	$\frac{74,200}{1,169,444} = 6\frac{1}{4}$
8	710	245,063	,,	11,174	—	
9	710	241,258	,,	7,369	—	
10	333	240,494	211,343	29,151	—	
11	333	229,701	same	18,358	—	
12	333	224,196	,,	12,853	—	$\frac{63,177}{1,056,715} = 6$
13	333	206,591	,,	+4,752	—	
14	333	218,910	,,	7,567	—	
15	405	211,390	191,013	20,377	—	
16	405	210,220	same	19,207	—	
17	405	203,456	,,	12,443	—	$\frac{58,089}{955,065} = 6$
18	405	195,463	,,	4,450	—	
19	405	192,625	,,	1,612	—	
—	—	4,818,914	4,532,070	291,596 less 4,752	—	$\frac{286,844}{4,532,070} = 6{\cdot}3$
				286,844		

at 435 for each year of life up to 14; and at 1,000 from 15 to 19 inclusive.

TABLE I.—*Apparent Deficiency in the* 1861 *Census, of* FEMALES *in*

1	2	3	4	5	6	7	8
	Registered Births.			Deaths.			
Year of Life.	—	Plus 6 to 13 per Cent.		—	Year of Age.	—	Emigration.
0	1860	6	354,307	1860	0	44,092	435
1	'59	—	357,472	1859-60	0 and 1	62,831	870
2	'58	—	339,722	'58-60	0 to 2	71,358	1,305
3	'57	—	342,458	'57-60	0 „ 3	78,681	1,740
4	'56	—	341,227	'56-60	0 „ 4	79,707	2,175
5	1855	9	339,027	1855-60	0 to 5	80,329	2,610
6	'54	—	338,263	'54-60	0 „ 6	81,745	3,045
7	'53	—	325,511	'53-60	0 „ 7	84,924	3,480
8	'52	—	332,406	'52-60	0 „ 8	86,480	3,915
9	'51	—	327,974	'51-60	0 „ 9	85,665	4,350
10	1850	11½	324,005	1850-60	0 to 10	81,769	4,785
11	'49	—	315,546	'49-60	0 „ 11	82,863	5,220
12	'48	—	306,305	'48-60	0 „ 12	80,279	5,655
13	'47	—	294,702	'47-60	0 „ 13	83,846	6,090
14	'46	—	311,618	'46-60	0 „ 14	89,984	6,525
15	1845	13	299,566	1845-60	0 to 15	84,945	7,525
16	'44	—	297,559	'44-60	0 „ 16	83,630	8,525
17	'43	—	290,124	'43-60	0 „ 17	82,716	9,525
18	'42	—	285,365	'42-60	0 „ 18	84,221	10,525
19	'41	—	281,871	'41-60	0 „ 19	84,301	11,525
Total	—	—	—	—	—	—	—

Note.—In column 8, the emigration is estimated, without any deduction for immigration,

the First Twenty Years of Ltfe. (*Same as* H, *but for Females.*)

9	10	11	12	13	14	15
One-third of Deaths.		Calculated Population, viz. Column 4 Minus 7 and 8 Plus 10.	Census to 1st January, 1861.	Deficiency.	Proportion per Cent. of Column 13 to Column 12.	Totals.
Year of Age.	1859.					
0	15,566	325,346	294,947	30,399	10½	Per Cent.
1	5,902	299,673	269,864	29,809	11	
2	3,168	270,227	266,896	3,331	1	$\frac{78616}{1341839}=6$
3	2,199	264,236	256,488	7,748	3	
4	1,628	260,973	253,644	7,329	3	
5	718	256,806	233,519	23,287	—	
6	718	254,191	same	20,672	—	
7	718	237,825	,,	4,306	—	$\frac{62633}{1167595}=5\frac{1}{2}$
8	718	242,729	,,	9,210	—	
9	718	238,677	,,	5,158	—	
10	359	237,810	208,431	29,379	—	
11	359	227,822	same	19,391	—	
12	359	220,730	,,	12,299	—	$\frac{64800}{1042155}=6$
13	359	205,125	,,	+ 3,306	—	
14	359	215,468	,,	7,037	—	
15	458	207,554	194,358	13,196	—	
16	458	205,862	same	11,504	—	
17	458	198,341	,,	3,983	—	$\frac{17547}{971790}=2$
18	458	191,077	,,	+ 3,281	—	
19	458	186,503	,,	+ 7,855	—	
—	—	4,746,975	4,523,379	238,038 less 14,442 223,596	—	$\frac{223596}{4523379}=5$

at 435 for each year of life up to 14, and at 1,000 from 15 to 19 inclusive.

TABLE K.—*Apparent Deficiency in the* 1861 *Census, of Male Infants under One Year Old; in each of the* COUNTIES *of England and Wales.*

1 Thousands.	2 Increase per Cent.	3 —	4 Births, 1860, Plus 6 per Cent.	5 Deaths, under 1, 1860.	6 One-third Deaths under 1, 1859.	7 Calculated Population, viz., Column 4 Minus 5 Plus 6.	8 Census to 1st January, 1861.	9 Deficiency.	10 Deficiency per Cent	11 Ten Years' Registered Births to 100 Married Women from 20 to 45 Years' Old.
20,066	12	England and Wales	370,787	56,892	19,644	333,539	296,993	36,546	12	299
2,804	19	London	50,503	7,901	2,588	45,190	42,136	3,054	7	270
140	9	Bedfordshire	2,577	470	158	2,265	2,009	256	12½	313
206	4	Berkshire	3,356	472	151	3,035	2,745	290	10	300
147	3	Buckinghamshire	2,656	398	142	2,400	2,056	344	16	306
182	−5	Cambridgeshire	3,238	526	201	2,913	2,540	373	15	311
470	11	Chester	8,572	1,397	461	7,636	6,837	799	12	302
365	4	Cornwall	6,671	934	328	6,065	5,240	825	15½	331
205	5	Cumberland	3,548	551	172	3,169	2,846	323	11	331
294	15	Derby	5,582	847	290	5,025	4,408	617	14	307
589	3	Devonshire	9,613	1,212	443	8,844	8,083	761	9	284
182	2	Dorsetshire	3,145	412	137	2,870	2,448	422	17	301
542	30	Durham	11,918	1,692	595	10,821	9,266	1,555	17	358
380	10	Essex	6,534	891	345	5,988	5,366	622	11½	289
444	6	Gloucestershire	7,431	1,019	354	6,766	5,988	778	13	290
457	19	Hants	7,679	963	335	7,051	6,292	759	12	290
108	7	Herefordshire	1,719	219	89	1,589	1,372	217	15½	290
177	4	Herts	3,046	453	141	2,734	2,356	378	16	304
59	·1	Huntingdonshire	1,087	170	66	983	855	128	15	317
545	19	Kent (*extra metropolitan*)	9,266	1,202	438	8,502	7,673	829	11	310
2,465	20	Lancashire	48,604	8,500	2,886	42,990	39,132	858	10	309
244	3	Leicestershire	4,574	798	279	4,055	3,659	396	11	309
404	1	Lincolnshire	7,138	1,084	427	6,481	5,557	924	17	312

TABLE K.—*Apparent Deficiency in the* 1861 *Census, of Male Infants—Contd.*

1 Thousands.	2 Increase per Cent.	3 —	4 Births, 1860, Plus 6 per Cent.	5 Deaths under 1, 1860.	6 One-third Deaths under 1, 1859.	7 Calculated Population, viz., Column 4 Minus 5 Plus 6.	8 Census to 1st January, 1861.	9 Deficiency.	10 Deficiency per Cent.	11 Ten Years' Registered Births to 100 Married Women from 20 to 45 Years' Old.
189	17	Middlesex (*extra metropolitan* ...)	3,040	407	143	2,776	2,607	169	6½	273
197	11	Monmouth	3,912	519	194	3,587	2,971	616	21	314
427	−2	Norfolk	7,357	1,326	447	6,478	5,600	878	16	292
231	7	Northamptonshire ..	4,558	747	259	4,070	3,540	530	15	300
343	13	Northumberland	6,456	907	314	5,863	5,223	640	12	317
324	9	Nottinghamshire ...	6,487	1,073	412	5,826	4,860	966	20	309
171	·3	Oxfordshire	3,141	456	160	2,845	2,436	409	17	310
23	−5	Rutlandshire	411	48	20	383	334	49	15	321
260	5	Salop	4,471	684	223	4,010	3,504	506	14	303
463	·2	Somersetshire	7,583	988	370	6,965	6,190	775	12½	297
770	23	Staffordshire	17,116	2,880	999	15,235	13,330	1,905	14	338
335	−·04	Suffolk	5,854	854	313	5,313	4,820	493	10	300
273	22	Surrey (*extra metropolitan*	4,424	548	183	4,059	3,721	338	9	271
367	8	Sussex	5,842	750	263	5,355	4,969	386	7	287
561	18	Warwickshire	11,102	1,734	653	10,021	8,830	1,191	13	305
61	4	Westmoreland	1,059	111	40	988	867	121	14	331
236	−2	Wiltshire	4,008	520	176	3,664	3,175	489	15	313
295	11	Worcestershire	5,438	765	311	4,984	4,463	521	12	299
275	20	East Riding	5,096	884	318	4,530	4,026	504	12	297
211	14	North ,, ...	3,903	525	191	3,569	3,081	488	16	340
1,530	14	West ,, ...	30,899	5,269	1,713	27,343	23,996	3,347	14	295
416	3	North Wales.....	6,757	1,030	290	6,017	5,368	649	12	306
700	6½	South ,, ...	13,403	1,756	625	12,272	10,254	2,018	19	302
			370,790	56,892	19,643	333,541	297,099	36,515	—	—

Note.—No allowance is made for emigration or immigration.

In column 11, the average is estimated by deducting from the census numbers, half the rate of increase: *e.g.* for England and Wales one-eighteenth part is deducted.

TABLE L.—*Apparent Deficiency in the* 1861 *Census, of Male Infants under one*

1 Thousands.	2 Increase per Cent.	3 —	4 Births, 1860, plus 6 per Cent.	5 Deaths under 1, 1860.	6 One-third Deaths under 1, 1859.
20,066	12	England and Wales	370,787	56,892	19,644
2,804	19	London	50,503	7,901	2,588
68	−2	Bath	908	129	57
213	22	Birmingham	4,552	749	270
120	32	Blackburn	2,668	502	160
130	14	Bolton	2,892	507	175
196	8	Bradford	3,932	760	236
78	18	Brighton	1,243	215	66
66	—	Bristol	1,137	192	66
50	13	Cheltenham	734	82	36
59	10	Chester	900	131	41
42	14	Coventry	887	149	67
51	17	Derby	1,051	162	52
59	24	Gateshead	1,316	178	65
57	12	Hull	952	174	66
118	16	Leeds	2,372	463	145
68	12	Leicester	1,649	285	93
270	4	Liverpool	4,565	1,025	378
62	−3	Macclesfield	1,121	204	76
244	7	Manchester	4,874	913	328
105	20	Salford	2,173	352	126
111	24	Newcastle-on-Tyne	2,175	355	128
74	9	Norwich	1,329	301	95
76	30	Nottingham	1,579	261	106
111	28	Oldham	2,288	434	145
63	20	Plymouth	1,059	179	64
95	31	Portsmouth	1,800	270	84
111	14	Preston	2,297	467	156
128	24	Sheffield	2,860	477	178
43	27	Southampton	878	117	55
94	5	Stockport	1,700	344	110
91	29	Sunderland	1,776	234	89
127	22	Wolverhampton	2,905	527	176
30	13	Yarmouth	551	109	42
60	10	York	1,097	197	57

Note.—For mode of calculation

year old, in some of the principal CITIES *and* TOWNS *of England and Wales.*

7 Calculated Population, viz., Column 4 Minus 5 Plus 6.	8 Census to 1st January, 1861.	9 Deficiency.	10 Deficiency, per Cent.	11 Ten Years' Registered Births to 100 Married Women from 20 to 45 Years' Old.	12 Ten Years' Births to 100 Marriages.	13 Ten Years' Births to 1,000 of Population.
333,539	296,993	36,546	12	299	404	34·07
45,190	42,136	3,054	7	270	327	33·47
836	753	83	11	264	279	25·49
4,073	3,653	420	11	313	390	40·73
2,326	2,088	238	11	343	419	40·45
2,560	2,154	406	19	349	451	41·40
3,408	2,996	412	14	318	413	39·33
1,094	1,014	80	8	293	346	31·32
1,011	885	126	14	276	175	33·20
688	582	106	18	271	304	25·63
810	794	16	2	291	310	30·18
805	615	190	31	315	342	39·62
941	815	126	15	300	298	37·44
1,203	1,021	182	17	338	552	39·86
844	841	3	—	246	273	32·42
2,054	1,833	221	12	298	231	37·86
1,457	1,121	336	30	308	358	37·25
3,918	4,070	+152	+ 4	252	224	34·14
993	802	191	24	300	381	33·86
4,289	3,886	403	10	300	201	38·65
1,947	1,716	231	13	305	928	38·34
1,948	1,829	119	6½	303	231	35·67
1,123	1,030	93	9	276	314	32·98
1,424	1,140	284	25	292	284	35·17
1,999	1,736	259	15	305	585	38·55
944	831	112	13	272	279	32·61
1,614	1,374	240	17	275	317	34·03
1,986	1,709	277	16	333	368	37·84
2,561	2,207	354	16	314	268	42·45
816	659	157	24	288	289	37·67
1,466	1,345	121	9	294	328	36·07
1,631	1,453	178	12	332	383	41·43
2,554	2,180	374	17	348	452	43·78
484	416	68	16	265	328	32·42
957	859	98	11	306	318	33·30

see note to Table K.

TABLE N.—AVERAGE *Population, Births, Marriages, and Deaths, in certain Cities and Comparison of the* ESTIMATED *Numbers of Births, Marriages,*

	1	2	3	4	5	6	7	8
	Population			Average Population.			Marriages.	
	1841.	1851.	1861.	1841-50. (First Decade.)	1851-60. (Second Decade.)	Excess per Cent. of Column 5 over Column 4.	First Decade Registered.	*Calculated* Second Decade viz, Column 7 Plus Column 6.
England and Wales...	15,914,148	17,927,609	20,066,224	16,920,879	18,996,916	12·27	1,355,497	1,521,828
London	1,948,417	2,362,236	2,803,989	2,155,326	2,583,113	19·85	209,847	251,501
Bath	69,083	69,817	68,336	69,465	69,092	—·54	6,431	6,396
Birmingham (parish)	133,215	173,951	212,621	156,083	193,286	23·83	13,951	17,276
Blackburn	75,088	90,738	119,942	82,913	105,340	27·05	7,583	9,631
Bolton.....	97,529	114,712	130,269	106,120	122,490	15·43	8,671	10,009
Bradford.....	132,161	181,964	196,475	157,063	189,220	20·48	14,045	16,921
Brighton.....	46,661	65,569	77,693	56,115	71,631	27·66	4,888	6,240
Bristol (parish).....	64,266	65,716	66,027	64,991	65,871	1·35	12,659	12,829
Cheltenham (district)	40,246	44,184	49,792	42,215	46,988	11·31	3,775	4,203
Chester	49,097	53,294	58,501	51,195	55,897	9·19	4,469	4,880
Coventry.....	31,032	36,812	41,647	33,922	39,229	15·65	3,700	4,279
Derby	35,019	43,684	51,049	39,351	47,367	20·34	4,565	5,494
Gateshead	38,747	48,081	59,409	43,414	53,745	23·80	2,840	3,515
Hull.....	41,150	50,670	56,888	45,910	53,779	17·12	6,025	7,055
Leeds*.....	—	—	—	—	—	—	—	—
Leicester.....	50,853	60,642	68,190	55,747	64,416	15·56	5,933	6,856
Liverpool	223,003	258,236	269,700	240,600	264,000	9·73	36,208	39,732
Macclesfield	56,035	63,327	61,500	59,700	62,400	4·53	4,954	5,179
Manchester	192,403	228,433	244,000	210,400	236,200	12·26	46,030	51,670
Salford	70,224	87,523	105,300	78,900	96,400	22·18	834	1,029
Newcastle-on-Tyne ...	71,844	89,156	111,000	80,500	100,000	24·22	11,033	13,705
Norwich	61,846	68,295	74,400	65,000	71,300	9 69	6,339	6,954
Nottingham	53,100	58,400	75,800	55,800	67,100	20·26	5,753	6,917
Oldham*.....	72,400	86,800	111,300	79,600	99,000	24·37		district
Plymouth	36,500	52,200	62,600	44,400	57,400	29·28	5,237	6,773
Portsmouth	53,100	72,100	94,800	62,600	83,500	33·39	7,503	10.009
Preston	77,200	96,500	110,500	86,800	103,500	19·24	7,757	9,252
Sheffield.....	85,300	103,600	129,000	94,400	116,300	23·20	12,152	14,971
Southampton.....	27,100	34,100	43,400	30,600	38,800	26 80	3,416	4,331
Stockport	85,700	90,200	94,400	88,000	92,300	4·89	6,405	6,718
Sunderland	56,200	70,600	90,700	63,400	80,700	27·28	6,781	8,629
Wolverhampton	80,700	104,200	126,900	92,500	115,600	24·97	9,188	11,482
Yarmouth	24,100	26,900	30,300	25,500	28,600	12·16	2,347	2,632
York*	47,800	57,100	60,000	52,500	58,600	11·62	5,103	5,697

* Changed districts.

Towns of England and Wales, during the Two Decades 1841-50 *and* 1851-60: *and nd Deaths, during the Second Decade, with the* REGISTERED *Number.*

9	10	11	12	13	14	15	16	17	18
Marriages.		Births.				Deaths.			
Registered Second Decade.	Excess or Deficiency Column 9 over Column 8.	First Decade Registered.	*Calculated* Second Decade, viz., Column 11 Plus Column 6.	*Registered* Second Decade.	Excess or Deficiency of Column 13 over Column 12.	First Decade Registered.	*Calculated* Second Decade, viz., Column 15 Plus Column 6.	*Registered* Second Decade.	Excess or Deficiency of Column 17 over Column 16.
1,601,731	+79,903	5,488,736	6,162,251	6,471,650	+309,399	3,769,396	4,231,932	4,210,715	−21,217
264,153	+12,652	673,790	807,538	864,563	+57,025	529,102	634,128	610,473	−23,655
6,314	−82	19,224	19,120	17,614	−1,506	16,674	16,584	15,224	−1,360
20,172	+2,896	57,268	70,916	78,720	+7,804	40,826	50,555	51,238	+683
10,180	+549	32,652	41,484	42,610	+1,126	20,881	26,529	27,750	+1,221
11,232	+1,223	43,781	50,537	50,712	+175	28,434	32,821	32,924	+103
18,143	+1,222	59,117	71,225	74,843	+3,618	39,061	47,060	48,609	+1,549
6,481	+241	15,152	19,344	22,438	+3,094	11,988	15,304	15,757	+453
12,486	−343	21,142	21,427	21,869	+442	18,581	18,832	17,594	−1,238
3 955	−248	11,989	13,345	12,042	−1,303	8,494	9,454	8,925	−529
5,423	+543	12.567	13,721	16,820	+3,099	12,025	13,130	12,374	−756
4,538	+259	11,848	13,693	15,542	+1,849	9,107	10,532	9,914	−618
5,951	+457	12,919	15,547	17,734	+2,187	9,437	11,356	11,407	+51
3,881	+366	14,693	18,190	21,425	+3,235	10,648	13,180	13,876	+696
6,382	−673	13,805	16,168	17,437	+1,269	14,062	16,468	13,279	−3,189
—	—	—	—	—	—	—	—	—	—
6,704	−152	20,856	24,101	23,998	−103	14,921	17,242	16,366	−876
40,259	+527	95,056	104,305	90,131	−14,174	94,373	103,564	87,898	−15,666
5,521	+342	20,011	20,918	21,040	+121	15,491	16,194	15,500	−694
45,369	−6,301	77,168	86,630	91,293	+4,663	69,615	78,150	74,359	−3,791
3,982	+2,953	30,965	37,832	36,974	−858	21,813	26,651	25,076	−1,575
15,418	+1,713	26,145	32,477	35,688	+3,211	21,598	26,829	27,388	+559
7,489	+535	17,375	19,060	23,519	+4,459	15,542	17,048	17,774	+726
8,308	+1,391	17,311	20,816	23,600	+2,784	14,222	17,102	17,890	+788
much	changed								
6,713	−60	14,004	18,105	18,707	+602	11,013	14,237	13,559	−678
8,950	−1,059	21,458	28,623	28,407	−216	15,461	20,623	19,017	−1,606
10,669	+1,417	30,692	36,597	39,176	+2,579	21,827	26,027	28,130	+2,103
18,439	+3,468	36,111	44,488	49,361	+4,873	25,174	31,012	33,084	+2,072
5,057	+726	9,039	11,462	14,601	+3,139	6,982	8,854	9,477	+623
10,142	+3,424	30,424	31,910	33,286	+1,376	22,237	23,324	13,643	+319
8,730	+101	23,048	29,350	33,413	+4,063	15,428	19,632	20,072	+440
11,188	−294	34,196	42,734	50,573	+7,839	25,176	31,462	31,899	+437
2,826	+194	8,119	9,106	9,261	+155	5,945	6,668	7,075	+407
5,976	+279	15,594	17,334	19,027	+1,693	12,388	13,770	13,718	−52

Leeds is entirely changed.

TABLE M.—*Apparent Deficiency in the* 1861 *Census, of Male Infants under One Year Old, in the* METROPOLIS *and certain of its* REGISTRATION DISTRICTS.

1 Thousands.	2 Increase per Cent.	3 —	4 Births, 1860, Plus 6 per Cent.	5 Deaths under 1, 1860.	6 One-third Deaths under 1, 1859.	7 Calculated Population, viz., Column 4 Minus 5 Plus 6.	8 Census to 1st January, 1861.	9 Deficiency.	10 Deficiency per Cent.	11 Ten Years' Registered Births to 100 Married Women from 20 to 45 Years' Old.
—	12	England and Wales	370,787	56,892	19,644	333,539	296,993	36,546	12	299
2,804	19	London	50,503	7,901	2,588	45,190	42,136	3,054	7	270
66	89	Lewisham	1,180	151	50	1,079	1,066	13	1	424
19	59	Hampstead	262	44	10	228	235	+7	+3	281
88	20	St. George's, Hanover Square	1,253	194	60	1,119	1,041	78	8	235
35	−3	St. James, Westminster	+505	90	34	449	449	—	—	230
162	3	Marylebone	2,614	461	159	2,312	2,150	162	7	254
23	−8	St. Martin-in-the-Fields	311	48	22	285	289	+4	+1	241
43	−3	Strand	657	111	41	587	586	1	—	230
129	18	Shoreditch	2,757	442	137	2,452	2,279	173	7	287
58	21	Bermondsey	1,237	190	62	1,109	1,043	66	6	285
49	1	St. George's-in-the-East	1,016	202	60	874	808	66	8	267
79	−1	Whitechapel	1,518	275	92	1,335	1,189	146	12	274
56	7	St. George's, Southwark	1,010	194	70	886	867	19	2	265
54	—	St. Giles's	987	178	50	859	722	137	19	270
27	−4	West London	430	91	29	368	367	1	—	249
46	−19	City	544	64	28	508	475	33	7	249
105	17	Bethnal Green	2,204	339	104	1,969	1,914	55	3	294

Note.—For modes of calculation, see note to Table K.

On Infant Mortality, *and on* Alleged Inaccuracies *of the* Census. *By* William Farr, Esq., M.D., D.C.L., F.R.S.

Part I.

[Read before the Statistical Society, February, 1865.]

I beg to call your attention this evening to as much of the birth, life, and death of little children as is recorded in the registers of the census year, 1861, and of some years preceding: to inquire into the rate of their mortality, and to state the assigned causes of their deaths. These little people, as well as centenarians, present difficulties which we do not encounter in adults. I will also endeavour to determine the relation between the births, the deaths of infants, and the infants enumerated on the census day.

Mr. Sargant has, in a second paper, completed his elaborate statement in which he endeavours to show that the census of 1861 "is not to be implicitly trusted;" and I shall have to submit to you certain reasons which will, I hope, lead you to transfer your distrust from the census to the soundness of Mr. Sargant's argument.

A few preliminary observations are necessary in reference to the facts, to the mode of their record, and to the trustworthiness of the evidence of their observers. The facts themselves are sufficiently obvious: the birth, and the death, and the existence of a child admit, except in the rarest instances, of the easiest possible verification. With regard to the designation of age, that is a different affair; on an average nearly 2,000 children are born daily in England and Wales; 14 every 10 minutes—more than *one* per *minute*. Hence if for the sake of great scientific precision, the age of infants in their first year had to be expressed in minutes, we should have them of all ages—from *one* minute to 525,949 minutes. The astrologers appear to have been satisfied with the hour for their horoscopes. Mothers state the age in weeks or months, up to twelve or twenty-four months, and after the age of *one* year, people are generally satisfied with the age stated in years. Unfortunately among the highest class of authorities, there are two different common modes of expressing the approximate age; and two different ages are expressed by the same numbers. Thus, a person of the age 31 and 360 days, is set down as 32 at an insurance office, and as 31 at an office for the sale of annuities. He is 31 *or* in his 32nd year in ordinary language: his nearest age in years is 32 years, as he would be called if fractions of years were expressed decimally, and decimals were dropped. Thus it is the rule to write 31·4 in round numbers 31,

and 31·5 is written 32. The ordinary practice is to call a man 31 until he is 32; and it is usually assumed, with sufficient accuracy, that of a body of men so called, the mean age is $31\frac{1}{2}$ years. There is, however, another mode in use; thus a child of 2 years and 11 months, is in some places, and by some classes, called a child in its *third year of age*. They write its age as 3 years in figures, whereas, according to the other mode of expression, the child's age is 2 years.

The mode of stating age among statists is by no means settled: our life and population tables now begin with *zero*, thus:—

Age.	Living.	Dying.	Population.
0	1,000	149	903
1	851	54	818
2	797	28	781

The table is read thus; of 1,000 children born simultaneously, 851 live one year, 149 die in the first year of age, and 903 will, on an average, be found living at a census in the first year of their age.

Instead of ages 0, 1, and 2, Halley wrote 1, 2, 3. Again, the ages grouped in decennial periods are differently expressed by different writers; thus in France, Sweden, England, and other countries, they write—

0 and under 5 = 0—5
20 „ 30 = 20—30.

The same facts as to age are expressed by Mr. Neison and by some other actuaries, thus: 0 to 4; 20 to 29. This is not a little puzzling; it is not exact; and it would be well if all could agree upon one system of expressing age, so as to avoid ambiguity. In our reports I find it convenient to write the age at the last birthday, and when the *interval* of age in a group of persons exceeds 1 year, to write the series of ages according to the same analogy in figures followed by a dash:—

Age.	
0—	787
5—	643
10—	511
15—	473

Note.—The table is read thus: 643 persons are of the age 5 and under the age 10.

With so much variation in the expression of the time a man has lived—called age—we can scarcely feel surprised to find in the various

censuses of Europe errors in the statements of age directly traceable to ambiguities of language. In the early years of life these mistakes demand attention, otherwise they may lead us into such grave mistakes as we have to notice.

The ages of the population were enumerated in England in the year 1841 for each year of age under 15; and the following is the series of children returned and classified by the Census Commissioners:—

Age.	Children at each Year of Age under 5 as returned at the Census of 1841.
0—	427,601
1—	427,966
2—	435,413
3—	408,332
4—	399,840

You will observe that not only the children of 1 and under 2, but also the children of 2 and under 3 years of age are returned as more numerous than the children in the first year of age (0—1); which, looking at the increase and great regularity of the births, as well as at the great number of deaths in the first two years of life, is impossible. In reflecting upon this, it appeared evident to me that this discrepancy in the ages arose from a certain number of the children in the *first year* of age, who should all have been placed against *zero* (0), having been carried on to 1; while children in the *second year* of age, who should have been set down against 1 year of age, were carried on to 2; where the excess was at a maximum; the errors afterwards more nearly counterbalancing each other. We despaired in 1851 of being able entirely to overcome the difficulty of getting the ages of young children exactly stated; and the ages of that census were all given in quinquennial periods, as we had better methods of getting the numbers at the early ages; and I foresaw that, if the uncorrected facts were published, they could, for various reasons, be of little use, and might mislead some unlucky person into an attempt to determine the mortality of infants by such data.

In 1861 the Secretary of State was requested, specially, by no less a body than the Statistical Society of London, to return distinctly the numbers of children living in each of the first *five years* of age.* Accordingly the attempt was made; and the result it is which has served, with some want of caution and some error on his part, to mislead Mr. Sargant into the startling conclusions which he has placed conspicuously at the head of his last paper; such as that "the infants below one year old are underrated" by 67,377; and

* See "Report of Council," in *Journal of the Statistical Society*, vol. xxiii, p. 223.

"that the males and females together, of all ages, are probably "underrated by more than half a million!" At this astounding result the honourable Fellow of the Society from Birmingham must himself have been startled. But he was undismayed. He had fallen into a pitfall, which, I regret to say, this Society had dug, and strewed with green branches and flowers; but he was unconscious of the trap into which he had been allured by a troop of innocent little children, some of whom were old enough to laugh at him for disbelieving in their recognition, because their mothers had in some instances misstated their ages.

The question of the degrees of confidence to be placed in the assigned numbers of the population is so important, that I must ask you to carefully weigh the evidence on both sides. We have before us two conflicting statements: the population of England and Wales, exclusive of army, navy, and merchant seamen abroad, was, according to the Census Report laid before parliament by the Secretary of State, 20,066,224, on April 8th, 1861. This is the announced result of the census inquiry, and the detailed numbers for every parish, small and great, in the country, are published in three folio volumes. That is one statement. The other is Mr. Sargant's, a person of great ability, the author of "Social Innovators," and the "Science "of Social Opulence," &c., &c. He asserts that the population of England and Wales at that date was more than 20,566,244. Her Majesty has, he says, half a million more subjects in England and Wales than were discovered by the Registrar-General and his coadjutors.

I will first proceed to state briefly some of the evidence upon which your confidence in the enumerated numbers is demanded. The Legislature, you will recollect, did its duty by passing the Act of the 23rd and 24th Victoria, cap. 61, which placed the conduct of the enumeration of the people in 1861 in the hands of the Secretary of State for the Home Department, then Sir George Lewis, who entrusted the operation to the Registrar-General, and the Department over which he presides. A *Householder's schedule* was carefully drawn up, after the experience which had been acquired in 1851; and this schedule was left with every occupier in the week preceding the 8th of April by the enumerators. The schedule, with "Approved, G. C. Lewis," on its face, informed the *occupier* that "persons who refuse to give CORRECT INFORMATION *are liable to* "*a penalty of five pounds*," and stated the general purposes of the inquiry. All the existing machinery of registration was turned to full account in the census. The staff of the General Register Office, the 634 superintendent registrars in their districts, and the 2,194 registrars were all employed in laying out and revising the work, for which they were adequately paid. In addition, 30,862

paid enumerators, selected specially for the work, were appointed to as many distinctly described tracts of the country. I hold in my hand a volume of the rules and regulations, assigning to every man his duties; telling him precisely what he had to do, when to do it, what he would be paid, and making his pay depend on the certified accuracy of his work. The original householders' schedules were sent to London, as well as the enumerators' books, into which the contents of the schedules were copied. Thus means existed at the Central Office for checking each entry, and with much labour the whole of the facts were revised. I lay an example of a revised book on the table. It was thought that the tendency might be to overlook some of the people, but this tendency, it was deemed, would be counteracted by the equitable rule that the pay of superintendents, registrars, and enumerators should be partly by a fixed fee for a minimum number, and partly by an additional fee for every 100 or 1,000 persons enumerated above that minimum number. I invite you again to examine the volume on the table. I am not aware that any rational means of securing accuracy in the total numbers of the people was neglected by the legislature or by the Registrar-General. And, singularly enough, it was not necessary to enforce, in 1851 or 1861, the penalty in a single instance, although a recalcitrant magistrate had to be mildly threatened, and prudently gave way. The Registrar-General received certainly less than twenty letters from householders, complaining that they had received no schedule; or that the schedule left had not been called for by the enumerator. The census was discussed in the newspapers, which rendered the Commissioners most important assistance; but the impression of gentlemen whom I have consulted is, that, addicted as Englishmen are to write to the newspapers, not more than half a dozen letters of complaint were brought under our notice.

The Duke of Wellington is reported to have said that few officers could move a mass of 20,000 men out of Hyde Park without confusion, but here the Registrar-General was fortunately able to animate and direct the movements of 33,690 intelligent Englishmen all over England and Wales, who collected in schedules the names, relation to head of family, condition, sex, age, occupation, birthplace of 20,066,224 people on the 8th of April, 1861; without confusion, certainly not without error in details, yet as regards numbers, in my opinion, nearly correct, leaving it uncertain whether the numbers were understated by omission, or overstated by counting twice over some of the travelling population.

In the report this happy issue is ascribed to the increasing intelligence of the people.

Now what is said on the other side? How does Mr. Sargant get his 36,546 "male infants" and his "30,831 female infants:"

making in all a flock of 67,377 strayed babies, besides other boys and girls and adults thrown in to make his small army of a round half million. Not, in the first place, you will remark, by a counter enumeration of a single parish or township. We are in the habit of estimating, as best we can, the population of different places in the intervals of the census; but we immediately withdraw with becoming modesty our estimates upon the appearance of the counted numbers. Not so Mr. Sargant, he holds to his calculations in the face of difficulties. Indeed he seems to disdain the low practice of counting: when the counted facts do not accord with his theory "so "much the worse for the facts." "Il n'y a rien de si méprisable "qu'un fait," exclaimed a great French philosopher.

Mr. Norman, in his admirable pamphlet on taxation, had said: "The amount of population at each decennial period, is known with "great exactness," for which he is thus reproved by Mr. Sargant: "But I am sure that if Mr. Norman were concerned in a grand "operation for buying up twenty million sheep, scattered all over "England and Wales, he would not be satisfied with one counting "done hurriedly in a single day!" The case is scarcely analogous; but the pastoral similitude will enable us to appreciate Mr. Sargant's method, in accordance with which Mr. Norman, under the circumstances should—instead of accepting the number of sheep counted by enumerators carefully appointed and paid for the purpose—have sent, not to our friends of the Institute of Actuaries, but to a certain sage soothsayer of Birmingham—who from the register of the births and deaths of lambs in the years 1859 and 1860, would tell him precisely how many lambs would be found alive on 8th of April, 1861; and further, how many sheep of all ages existed on the land in every county at that date, by the use of one magical inflexible formula. Mr. Sargant seriously asks an eminent Director of the Bank of England to accept this species of inconvertible paper for a Government security.

Admitting the theory, let us look into the practical difficulties which a calculator—as sagacious as Mr. Sargant has shown himself to be—would encounter in getting at his lambs under 1 year of age indirectly. The correctness of his formula for passing from lambs born, to lambs living at a distant day, may be questioned; but passing that, it is quite certain that no one formula would cover all the special contingencies and circumstances of every county. Again, it is quite possible that as the names of lambs vary in every county, the numbers might be returned under other heads than those he expected. I hold in my hand a greater authority than I pretend to be on this subject—Mr. Martin's book on sheep. It will be seen that here the farmer's nomenclature of age is even more puzzling than ours. Mr. Sargant would have many things to learn before he could

be sure of his affair. He would find on inquiry that the lamb is not out of its first year of age—not a *first-shear lamb*—until its first shearing, when it may be in reality 15, 16, or 17 months old. "In "the north of England and in Scotland, too, the male "is called, "until his first shearing, a *tup-lamb*, then a *tup-hog*, after that a *tup*; "or, if castrated, a *dinmont* or a *wedder*." Here follows a long string of strange names, quite orthodox; and then, as you may expect, there are other names "restricted to certain localities." Mr. Sargant disdains such details, but unless he study the nomenclature would he be justified in asserting that there were half a million more sheep in the country than had been counted, because the lambs of the first year did not come up to the mark? Why a little confusion of *tups*, *wedders*, *hogs* and *tegs*, of *gimmer hogs*, and *sheederewes*, with *first shears* and *second* shears, would confound all his conclusions, and upon reflection he would, I feel assured, fall back upon the counted numbers.

With respect to the census, the difficulties were not so great; but the perplexed specifications of age everywhere lead to some confusion. Let us look at France, for instance, where the census is taken with great deliberation, and the operation extends over weeks or months every five years, and where the births and deaths are, it is generally believed, all registered. The annual births in France, on an average of the two years, 1855-56, were 927,226; and the deaths under 1 year of age, were 159,196 in the census year, 1856; so during that year the average number of children under 1 year of age could not have been more than 927,226, nor less than 768,030 (= 927,226 − 159,196); but after correcting for the excess of returned deaths in the first weeks and months, the mean numbers living in their first year should be 812,413. Yet the number of infants enumerated under 1 year of age was only 740,449, or less by 71,964 than the calculated number! This is Mr. Sargant's case: by his hypothesis, these 71,964 babies have not been counted at all, and the French census is to that extent deficient. The Queen, you see, gains little relative advantage by Mr. Sargant's half million of subjects, as at least an equal proportion has to be added to the subjects of the Emperor of the French. The whole of Mr. Sargant's case, I repeat, turns upon the babies; and I must ask you to weigh well the antecedent improbability of their escaping enumeration. No doubt in the eyes of some philosophers, some hundreds of thousands of young mortals—often a span or two long—look very insignificant little creatures, who in a general count would be easily overlooked—by the same philosophers. But the census had people of a different mould to deal with. In nearly every house with an infant in it, there was a woman; and to express the highest degree of improbability, the Almighty asks: "Can a woman forget her

"sucking child?"* Hence the enumerator could scarcely fail to hear of the little creature's existence who would count as one in his pay list. Then in that other case, where the "head of the family" filled up the schedule, could *he* forget in the morning the darling of his house, whose sweet voice had probably rung in his ears through several hours of the census night? The antecedent improbability of Mr. Sargant's hypothesis is, I maintain, enormous.

It is quite certain, however, that in France about 71,964 infants in the first year of life were not reckoned in that group of age; and Mr. Sargant's premise is, that unless they were enumerated at the age 0—1, they were not reckoned at all, but were altogether lost.

The other hypothesis assumes that they were reckoned in the next crib (1—2) by reason of the popular confusion of first year of age, with one year of age; while in the same way many children of the second year were classed as of the age 2—3, and so on. We have the means of testing this hypothesis in the English returns to which I now invite your attention.

If a certain number of children of the first and second year have been thrown onwards, we ought to discover many of them under the ages 2, 3, 4, and 5; by following up in the birth and death registers the numbers born, the dying in each year, and the surviving at the respective ages in the census year. The ages of deceased children are registered deliberately; and, upon the whole correctly, by instructed registrars; and under 1 or 2 years ages are stated in weeks or months: all the births are not registered. But I take the numbers literally as they are returned from the Registrar-General's reports, and shall notice afterwards the room there is for any correction.

All the children under 1 year of age on 8th April, 1861, must have been born in the preceding twelve months, when the births registered were 673,801. If we knew the precise number of births, the deaths out of that number, as well as the inflow and the outflow of migration in those twelve months, we should obtain the precise number of infants living under 1 year of age on the census day. Such precise knowledge is not within our reach—the majority of the births are registered within the first six weeks after their occurrence, and the infants' deaths of a year include the deaths of infants born within that year and the year preceding it. But an approximation to the numbers surviving can be obtained sufficiently near for the purposes of our argument, from the mean births of 1860-61, and the deaths under 1 year of age in 1861. If the number of annual births remain constant, the number of infants living in any year must lie between the annual number of births and that number

* Isaiah, chap. xlix, v. 15.

diminished by the deaths under the first year of age. It would be nearer the latter than the former number, on account of the excess of deaths in the first months of life.

The diagram will enable us to explain this relation, see p. 149. The average number of annual births in the two years 1860-61 was 690,227. Let us deal, for the sake of simplification, with 1,000 *daily* births, then of the 1,000 born on the first day of a year a certain number die day by day through the year; and as every day a fresh wave of 1,000 lives emerges to die off at the same or at a similar rate, you will find by enumeration decreasing numbers one day, two days, three days . . . . . 365 days old in your population. The 365,000 under 1 year of age are reduced to 329,515 by death. By the English Life Table the numbers surviving out of 1,000,000 births at the end of every month of the first year of age are shown; and if it were necessary, the numbers for each day could be interpolated. From this table carried on the numbers maintained in the first, second, third . . . . years of life are readily deduced.

The births increase variously in England and Wales, and the deaths fluctuate; but by taking the mean births in 1856-57 we get an annual number of births out of which it may be assumed the deaths in the first year of age occur in 1857, the deaths in the *second year* of age occur in 1858, the deaths in the *third year* of age occur in 1859, the deaths in the fourth year of age occur in 1860, and the deaths in the fifth year of age occur in 1861. By subtracting the deaths in each year of age from the births we get the survivors. The births of 1857-58 are treated in the same manner, and you can trace the results in the appended tables.

We thus obtain numbers living at each year of age which will serve for comparison with the numbers enumerated at the corresponding ages in the census year.

Now, if the ages of the children have been at all mis-stated, according to our hypothesis, the census numbers of children will be understated against the ages 0 and 1; but after that age the census numbers will be somewhat in excess of the calculated. That, you will observe, is the case. The census numbers under five years of age are actually in excess of the calculated numbers. See Table V.

Here, then, we find Mr. Sargant's lost babies in the third, fourth, and fifth boxes. The excess in the five boxes is 28,851; and if we push the comparison further, the census picks up thousands every year. To this excess should be added the infants carried abroad annually by young married emigrants. They are much more numerous than Mr. Sargant supposes; and only 1,000 infants taken out of the country annually in the end diminish the population by 40,000.

This is one set off against the addition which should be made to our calculated numbers of children for births unregistered; which

can only be loosely calculated for want of the requisite data. In the Census Report I estimated the average annual numbers unregistered in the ten years 1851-60 at 36,950. During the last of these ten years the registration approached nearer, than it did in the first, to the actual number of births; and of unregistered births a certain number are never registered as deaths—but are buried probably still-born; these should be struck off both sides of the account. I have taken as the basis of our calculated table 690,227; whereas the births registered in the year ending 31st March, 1861 (the census was taken on 8th April), were only 673,801. This raises the estimated number in the first year, and is in itself a set off against unregistered births; which Mr. Sargant may play with to any extent, as nobody can check him. As a strong counter-current to the emigration of the English race, there is a continual influx of Irish, Scottish, colonial, and foreign settlers into England, of whom no record is kept; so that it is impossible to ascertain their numbers. Again the Emigration Commissioners have only distinguished the emigrants of English origin from the rest since 1853; when their records show that 454,422 English people of all ages left our shores. The average annual number of English emigrants was 56,803; and the number in the ten years, if this average is adopted for 1851-52 is 568,027. But the emigration of 1851-52 was heavy, and it bore chiefly on the Irish people. At the census, by applying the proportion of later years, the emigrants were estimated at 640,316. By taking the army, navy, and merchant seamen abroad into account in both 1851 and 1861, we account for the increase in their numbers of 35,712 in the interval.

Let us first deal with the recorded facts: the population in 1861 exceeded that of 1851 by 2,174,327; and the births registered in the interval exceeded the deaths registered by 2,267,518; thus leaving a margin for emigration of 93,191.

Registered births, 1851-61	6,503,545
Deaths	4,236,027
Excess of births registered	2,267,518
Population enumerated, 1861	20,228,497
,, '51	18,054,170
Excess of population, 1861	2,174,327

The emigrants by one estimate were 640,316, by another 568,027; and after deducting the excess of 93,191 births, 547,125 or 474,836 remain. By operating only upon the population at home the latter number is reduced to 439,124. 54,713 immigrants from Ireland, Scotland, the colonies, and foreign parts—entering England annually

—would, by one estimate, replace the whole of the English emigrants; while 47,484 would replace them by the other estimate. These immigrants include returning emigrants. But it is quite certain that a proportion of either is made up of unregistered births. How many of the 54,713 or 47,484—for the precise number is uncertain—are immigrants, and how many are children whose births have never been registered?

Of the hundreds of thousands of people of Irish, Scotch, and foreign blood in England, only those *born* in their respective countries were distinguished at the census; they were returned as 946,172; and the increase since 1851 was 184,219, or 18,422 annually. Deduct 18,422 from 54,713 annual emigrants, and we get 36,291; or taking it from 47,484 emigrants, 29,062; who—if the *birth-places were correctly returned at the census*—represent approximately the annual average number of unregistered births in the ten years 1851-60. This qualification is necessary because the Irish immigrants in England having before their eyes the fear of removal to Ireland, might have often assigned England as the birth-place of their children; the enumerator could not correct their statement; and if this were done more extensively in 1861 than in 1851, the average annual increase of 18,422 from this cause would be swollen to double that number or more, leaving a smaller deficiency of unregistered births. The estimate of unregistered births is also to be reduced by returning emigrants. Take the unregistered births in the ten years 1851-60 at any figure, then it will be evident from the annexed table that the numbers deficient in the years before the census were few compared with the numbers in the earlier part of the decenniad.

Table showing the Increase of Registered Births.

Years since Registration began.		Registered Births.	Excess in each Year over Numbers in 1851-52-53.
	1851-52-53, *average of* 3 *years*	617,423	—
17	'54	634,405	16,982
18	'55	635,043	17,620
19	'56	657,453	40,030
20	'57	663,071	45,648
21	'58	655,481	38,058
22	'59	689,881	72,458
23	'60	684,048	66,625
24	'61	696,406	78,983

Thus, whatever the defects in the registration of births were in the ten years, it is evident that the deficiency would fall to a larger extent on the first five years than on the last five years of the ten.

I have a series of tables before me, proving that the registration of births has undergone rapid improvement, as the people have found out its utility to their children; but I still think a clause inflicting a penalty on parents and occupiers for the neglect of registration would bring in a certain number of births which escape, although the public generally appreciate its importance, and the registrars have a pecuniary interest in recording every birth, as their fees have a direct relation to the numbers which they record.

I have other tables with which I will not trouble you. But by carrying on the calculation to 15 or 20 years of age, if it is based on the registered births, the census shows much larger numbers than the calculation leads us to expect; and these numbers can only be accounted for by immigration of the Irish chiefly, and by unrecorded births in the earlier years of registration. I may state, however, that the data upon which these calculations—and the corresponding calculations of Mr. Sargant—are based, are either difficult of verification or conjectural; and I do not conceive for a moment that any results deducible from them justify us in setting aside the counted numbers of the children, whose enumeration presented little or no difficulty at the census.

I do not desire to over-rate the accuracy of the census figures; and should be exceedingly glad if Mr. Sargant's proposition for another enumeration of even his own town could be carried out. But I fear that there is no chance of getting the work done; and that if it were attempted in our moveable population it would issue in no satisfactory result.

In the office reports we have always pointed out any apparent defects in the data; and after careful consideration of Mr. Sargant's ingenious paper, and of the facts of the case, with every disposition to admit defects, my faith in the enumerated numbers is confirmed; and if my confidence is at all shaken, it is in my estimate of the extent of the number of unregistered births; the registration of which is certainly now more complete than I have generally imagined.

It is satisfactory at any rate, and I fondly hope that it may afford Mr. Sargant's breast some consolation to find that it is unnecessary to shed natural tears, to strew withered leaves, or even flowers, over 67,377 babes lost in the Census Wood.

The variation in the practice of returning the ages of children is great in different towns; and so is necessarily any defect in the registration of births. And furthermore it is impossible to pass by one general ratio from the births in a town to the numbers surviving at a census; as the deaths in infancy are differently distributed in every town and year, according as this or that form of disease is prevalent: convulsions kill the infant of the first month; measles, scarlatina, whooping cough, kill him later, or in the tenth, eleventh,

and twelfth month. The ages at which the deaths occur, affect the numbers to be enumerated; thus, if 200 infants die out of 1,000 in the first hour of their birth, the census will find only 800 living under 1 year of age; if they die on the last hour of the year 1,000 will be enumerated; and under the prevailing laws of mortality the actual numbers will range between these extremes from 800 to 850, 900, 920, and so on. In particular towns there will be a greater range of variations between the numbers of infants living deduced by one formula from the births, or the deaths under 1 year, and the numbers actually living on a given day under 1 year of age.

The Superintendent Registrars of the districts in which Mr. Sargant affirms the infants have not been enumerated, repudiate this imputation on their registrars and enumerators.

I conclude, then, (1) that the measures which were taken by the Legislature, Her Majesty's Government, and the Registrar-General, to secure an accurate census of the population, were adequate.

2. That on the whole they were successfully carried into execution.

3. That Mr. Sargant's calculations, by which he attempts to prove that 67,377 infants were not enumerated, are illusory.

4. That he has failed to make due allowance for the practice of putting down children in their first, second, and third year of age, as 1, 2 and 3 years old; by which the numbers are advanced one year: and that his lost infants are found and can be traced in the returns.

5. That his method of calculating the rate of mortality in his first paper was, as he now candidly admits, "a blunder."

6. That Mr. Sargant's statement, that "the death-rate of the "Registrar-General is the proportion of deaths to infants left alive" at the end of the year out of a given number of births, is an error. The death-rate has never been so understood by any writer.

7. Mr. Sargant, in concluding his paper, says, "inquirers there-"fore often want to trace the growth from 1801 to 1861; but they "find that while the *county* census is given for each enumeration (Vol. "I, p. xiv), the same thing is not done for the *towns*, nor even for the "principal of them. To find the growth of Liverpool or Leeds, *we* "*must turn over half a dozen volumes.*" So far from having to turn over "half a dozen volumes," he had only to turn to one; a table of the population of 72 of the largest towns at each census since that of 1801, was compiled with great care; it is referred to in the Report, p. 12 and in the table of contents, p. v; and is printed in full at pp. 102, 103, "Appendix to Census Report," 1861. Other inaccuracies occur in both his papers.

8. "The town councils of boroughs are responsible to the country "for the adoption of sanitary measures within their boundaries.

"The first information they need is the comparative death-rates of "their own and of other boroughs." This remark of Mr. Sargant is so perfectly reasonable that the Registrar-General has taken it into account in his recent weekly publication of the births and deaths in ten of the principal cities and boroughs of the United Kingdom. And I am confident that he will always be glad to attend to any other equally wise suggestion which Mr. Sargant or any other Fellow of this Society may be pleased to make. For all ordinary statistical purposes I hold, however, that the subdivision of the country into unions is more suitable than the division into boroughs, parishes, and counties.

Part II.

(*On the Diseases of Infancy, will be printed in a subsequent number*).

APPENDIX.

I.—*Mean Number of Births Registered in each of the Years* 1857-61 *in* England and Wales.

1	2	3	4
	Children.		
Years.	Number of Births Registered in each Year.	Mean Number of Registered Births at date in Column 4.	Assumed Average Date of the Births in the Two Bracketed Years.
1856.....	657,453		
		660,262	1st of January, 1857
1857.....	663,071		
		659,276	„ 1858
1858.....	655,481		
		672,681	„ 1859
1859.....	689,881		
		686,965	„ 1860
1860.....	684,048		
		690,227	„ 1861
1861.....	696,406		

II.—Number of Deaths *of Children Registered at Ages under Five Years in each of the Years* 1857 *to* 1861 *in* England and Wales.

Years.	Births.	Deaths of Children at Ages.				
		0 and under 1 Year.	1 and under 2 Years.	2 and under 3 Years.	3 and under 4 Years.	4 and under 5 Years.
1857	660,262	103,227				
1858	659,276	103,837	37,454			
1859	672,681	105,629	36,752	19,195		
1860	686,965	100,984	33,431	15,520	9,927	
1861	690,227	106,428	40,033	17,536	10,150	6,982

III.—*Number of Children Living at each Year of Age under Five, deduced from the Mean Births and from the Deaths Registered at each Year of Age under Five, in* ENGLAND AND WALES.

1	2	3	4
	Children.		
	Numbers Living at each Age in Column 4.	Numbers Dying in each Year.	Ages.
Numbers born on 1st January, 1857	660,262	103,227	0—
„ surviving on 1st January, 1858	557,035	37,454	1—
„ „ „ '59	519,581	19,195	2—
„ „ „ '60	500,386	9,927	3—
„ „ „ '61	490,459	6,982	4—
„ „ „ '62	483,477	—	—
Numbers born on 1st January, 1858	659,276	103,837	0—
„ surviving on 1st January, 1859	555,439	36,752	1—
„ „ „ '60	518,687	15,520	2—
„ „ „ '61	503,167	10,150	3—
„ „ „ '62	493,017	—	—
Numbers born on 1st January, 1859	672,681	105,629	0—
„ surviving on 1st January, 1860	567,052	33,431	1—
„ „ „ '61	533,621	17,536	2—
„ „ „ '62	516,085	—	—
Numbers born on 1st January, 1860	686,965	100,984	0—
„ surviving on 1st January, 1861 ..	585,981	40,033	1—
„ „ „ '62	545,948	—	—
Numbers born on 1st January, 1861	690,227	106,428	0—
„ surviving on 1st January, 1862	583,799	—	—

Note.—The mean date of the births in 1856 and 1857 is assumed to be 1st January, 1857, and so in other cases.

IV.—England and Wales.

		Mean.
The living at age 0—1 in the middle of 1861		
Should be *less* than.....	690,227	596,063 (Corrected.)
And *more* than	583,799	
The living at age 1—2 in the middle of 1861		
Should be *less* than.....	585,981	565,965 „
And *more* than	545,948	
The living at age 2—3 in the middle of 1861		
Should be *less* than.....	533,621	524,853 „
And *more* than	516,085	
The living at age 3—4 in the middle of 1861		
Should be *less* than.....	503,167	498,092 „
And *more* than	493,017	
The living at age 4—5 in the middle of 1861		
Should be *less* than.....	490,459	486,968 „
And *more* than	483,477	

V.—*Number of Children in Excess or Defect of the Census of* 1861, *at each Year of Age under Five, as compared with the Numbers deduced from the Mean Registered Births, and from the Deaths Registered at each Year of Age under Five in* England and Wales.

Ages.	Children.		
	Living at each Year of Age under Five.		
	Enumerated at the Census of 1861.	Deduced from the Mean Number of Births, and from the Deaths Registered at each Year of Age under Five.	Numbers in Excess or Defect of the Census.
0 and under 1.....	593,721	596,063	− 2,342 census in defect
1 „ 2.....	543,040	565,965	−22,925 „
2 „ 3.....	535,981	524,853	+11,128 census in excess
3 „ 4.....	516,296	498,092	+18,204 „
4 „ 5.....	511,744	486,968	+24,786 „
Total of 0 and under 5 years	2,700,782	2,671,941	+28,851 Census in excess

VI.—*Mortality per* 1,000 *of Children under* 5 *Years of Age in the Ten Years,* 1851-60, *in certain Districts of* ENGLAND AND WALES.

Districts.	Mortality per 1,000 of Children under 5 Years of Age.	
	Males.	Females.
In 63 *Healthy Districts* (1849-53)	43·48	37·20
In 5 *Country Districts* (1851-60), *viz.*—		
(113) Alresford	37·55	30·42
(130) Easthampstead	36·82	30·40
(292) Crediton	39·03	34·40
(557) Bellingham	25·93	20·40
(604) Knighton	41·22	32·49
In London (1851-60)	83·11	72·95
In 6 *Town Districts* (1851-60), *viz.*—		
(329) Bristol	95·07	81·21
(394) Birmingham	100·29	88·66
(461) Liverpool	137·41	126·54
(472) Salford	103·27	91·90
(473) Manchester	123·80	110·70
(501) Leeds	108·92	96·62

VII.—BIRTH-RATE *to every* 1,000 *Living in the Ten Years,* 1851-60, *in certain Districts of* ENGLAND AND WALES.

Districts.	Births to every 1,000 Living of all Ages.	
	Males.	Females.
In 5 *Country Districts* (1851-60), *viz.*—		
(113) Alresford	29·82	27·86
(130) Easthampstead	24·10	24·57
(292) Crediton	29·91	28·33
(557) Bellingham	24·80	26·22
(604) Knighton	32·07	32·96
In London (1851-60)	36·51	30·81
In 6 *Town Districts* (1851-60), *viz.*—		
(329) Bristol	36·50	30·36
(394) Birmingham	42·28	39·24
(461) Liverpool	35·74	32·59
(472) Salford	41·30	35·68
(473) Manchester	41·38	36·16
(501) Leeds	39·96	35·89

VIII.—*Table showing the* Causes of Death *of* Children under One Year of Age *in* England and Wales *in each of the Three Years* 1860, 1861, *and* 1862.

Diseases.*	Boys and Girls.			Boys.			Girls.		
	Under 1 Year of Age.								
	1860.	1861.	1862.	1860.	1861.	1862.	1860.	1861.	1862.
CLASS I.—Order I.									
1. Small-pox	649	330	392	352	163	189	297	167	203
2. Measles	1,734	1,675	1,704	905	916	923	829	759	781
3. Scarlatina	682	572	903	367	308	517	315	264	386
4. Diphtheria	448	361	412	252	196	244	196	165	168
5. Quinsy	26	37	42	10	23	26	16	14	16
6. Croup	618	606	743	371	347	446	247	259	297
7. Whooping-cough	3,580	4,727	5,045	1,781	2,284	2,516	1,799	2,443	2,529
8. Typhus	499	505	589	268	287	329	231	218	260
9. Erysipelas	512	492	458	244	239	233	268	253	225
1. Carbuncle	2	2	3	—	1	—	2	1	3
2. Influenza	255	179	212	144	101	129	111	78	83
3. Dysentery	267	315	235	157	173	144	110	142	91
4. Diarrhœa	5,067	10,557	5,928	2,846	5,800	3,276	2,221	4,757	2,652
5. Cholera	95	254	155	43	144	91	52	110	64
6. Ague	6	5	2	3	2	—	3	3	2
7. Remittent fever	38	9	20	26	6	13	12	3	7
8. Rheumatism	5	2	4	2	1	3	3	1	1
9. Other zymotic diseases	31	37	35	19	22	25	12	15	10
Order II.									
1. Syphilis	767	798	867	430	434	467	337	364	400
3. Hydrophobia	1	—	—	1	—	—	—	—	—
Order III.									
1. Privation	3	3	6	—	2	3	3	1	3
2. Want of breast-milk	992	950	997	515	491	531	477	459	466
3. Purpura and scurvy	56	63	59	29	35	29	27	28	30
Order IV.									
1. Thrush	881	974	860	472	528	457	409	446	403
2. Worms, &c.	21	16	25	14	12	15	7	4	10
CLASS II.—Order I.									
2. Dropsy	256	231	279	125	124	165	131	107	114
3. Cancer	5	4	1	4	2	1	1	2	—
4. Noma	18	17	24	7	9	14	11	8	10
5. Mortification	81	75	68	43	41	28	38	34	40
Order II.									
1. Scrofula	374	438	463	212	258	268	162	180	195
2. Tabes mesenterica	2,007	2,264	2,063	1,125	1,234	1,110	882	1,030	953
3. Phthisis	935	944	865	496	475	459	439	469	406
4. Hydrocephalus	2,650	2,770	2,632	1,613	1,663	1,657	1,037	1,107	975

* Some diseases which are not fatal at the early ages, are omitted from this table.

VIII.—*Table showing the* CAUSES OF DEATH *of* CHILDREN UNDER ONE YEAR OF AGE—*Contd.*

Diseases.	Boys and Girls.			Boys.			Girls.		
	Under 1 Year of Age.								
	1860.	1861.	1862.	1860.	1861.	1862.	1860.	1861.	1862.
CLASS III.—ORDER I.									
1. Cephalitis	580	567	645	334	329	380	246	238	265
2. Apoplexy	169	140	187	90	81	112	79	59	75
3. Paralysis	13	12	9	4	5	4	9	7	5
5. Chorea	2	—	—	2	—	—	—	—	—
6. Epilepsy	48	64	60	30	41	43	18	23	17
7. Convulsions	20,796	20,428	20,261	11,911	11,907	11,788	8,885	8,521	8,473
8. Brain disease, &c.	439	459	472	260	265	255	179	194	217
ORDER II.									
1. Pericarditis	7	12	9	6	7	7	1	5	2
3. Heart disease, &c.	98	103	95	52	65	57	46	38	38
ORDER III.									
1. Laryngitis	274	312	317	185	197	199	89	115	118
2. Bronchitis	6,884	6,156	6,865	3,987	3,466	3,938	2,897	2,690	2,927
3. Pleurisy	38	35	29	25	19	18	13	16	11
4. Pneumonia	9,871	8,495	8,884	5,800	4,898	5,161	4,071	3,597	3,723
5. Asthma	5	14	9	2	8	6	3	6	3
6. Lung disease, &c.	732	819	981	396	470	560	336	349	421
ORDER IV.									
1. Gastritis	59	83	60	31	44	34	28	39	26
2. Enteritis	869	956	795	507	533	489	362	423	306
3. Peritonitis	113	101	107	61	60	62	52	41	45
4. Ascites	5	8	7	4	6	4	1	2	3
5. Ulceration of intestines	69	59	46	36	37	29	33	22	17
6. Hernia	50	46	43	42	39	37	8	7	6
7. Ileus	153	166	152	94	98	99	59	68	53
8. Intussusception	49	47	65	31	32	46	18	15	19
9. Stricture of intestines	6	4	4	3	3	3	3	1	1
10. Fistula	1	—	—	1	—	—	—	—	—
11. Stomach disease, &c.	296	316	266	165	195	135	131	121	131
12. Pancreas ,,	1	1	—	1	—	—	—	1	—
13. Hepatitis	25	28	16	16	15	10	9	13	6
14. Jaundice	397	434	421	240	286	265	157	148	156
15. Liver disease, &c.	79	110	63	49	60	41	30	50	22
16. Spleen ,,	6	5	5	2	2	3	4	3	2
ORDER V.									
1. Nephritis	7	6	7	2	5	5	5	1	2
2. Ischuria	—	2	2	—	1	2	—	1	—
3. Nephria	6	5	6	5	—	3	1	5	3
4. Diabetes	—	—	1	—	—	—	—	—	1
6. Cystisis	5	2	4	3	1	2	2	1	2
7. Kidney disease	19	25	31	12	13	17	7	12	14

VIII.—*Table showing the* Causes of Death *of* Children under One Year of Age – *Contd.*

Diseases.	Boys and Girls.			Boys.			Girls.		
	Under 1 Year of Age.								
	1860.	1861.	1862.	1860.	1861.	1862.	1860.	1861.	1862.
Order VI.									
2. Uterus disease, &c.	6	5	9	1	5	6	5	—	3
Order VII.									
1. Arthritis	5	1	1	—	—	1	5	1	—
2. Joint disease, &c.	39	35	40	18	16	19	21	19	21
Order VIII.									
1. Phlegmon	157	153	119	72	77	56	85	76	63
2. Ulcer	71	78	68	31	35	31	40	43	37
3. Skin disease, &c.	149	170	183	84	87	119	65	83	64
CLASS IV.—Order I.									
1. Premature birth	7,642	7,610	7,704	4,328	4,371	4,290	3,314	3,239	3,414
2. Cyanosis	351	363	384	221	211	232	130	152	152
3. Spina bifida	337	374	366	151	146	153	186	228	213
4. Other malformations	396	419	402	252	248	230	144	171	172
5. Teething	1,962	2,010	1,877	1,097	1,141	1,035	865	869	842
Order IV.									
1. Atrophy and debility	18,994	20,297	18,618	10,592	11,196	10,153	8,402	9,101	8,465
CLASS V.—Order I. (*Accident or Negligence.*)									
1. Fractures and contusions	45	50	63	22	30	33	23	20	30
3. Cut, stab	2	1	2	1	1	2	1	—	—
4. Burns and scalds	119	100	117	62	62	47	57	38	70
5. Poison	74	69	75	38	41	40	36	28	35
6. Drowning	25	24	30	16	12	14	9	12	16
7. Suffocation	760	682	720	419	373	381	341	309	339
8. Otherwise	122	180	219	71	105	128	51	75	91
Order III.—(*Homicide.*)									
1. Murder and manslaughter	206	147	167	97	60	88	109	87	79
Other violent deaths (not classed)	1	15	7	1	11	4	—	4	3
Sudden deaths (cause unascertained)	770	698	746	396	388	389	374	310	357
Cause not specified or ill-defined	3,019	2,715	2,441	1,657	1,548	1,387	1,362	1,167	1,054
Total	100,984	106,428	101,373	56,892	59,673	56,960	44,092	46,755	44,413

IX.—*Table showing the* CAUSES OF DEATH *of* CHILDREN UNDER FIVE YEARS OF AGE, *in* ENGLAND AND WALES *in each of the Three Years*, 1860, 1861, *and* 1862.

Diseases.*	Boys and Girls.			Boys.			Girls.		
	Under 5 Years of Age.								
	1860.	1861.	1862.	1860.	1861.	1862.	1860.	1861.	1862.
CLASS I.—ORDER I.									
1. Small-pox	1,544	723	931	788	348	460	756	375	471
2. Measles	8,783	8,327	8,981	4,432	4,289	4,621	4,351	4,038	4,360
3. Scarlatina	6,259	5,892	9,569	3,222	3,040	4,996	3,037	2,852	4,573
4. Diphtheria	2,678	2,368	2,724	1,328	1,153	1,306	1,350	1,215	1,418
5. Quinsy	139	168	148	70	95	81	69	73	67
6. Croup	3,808	3,863	4,994	2,103	2,062	2,660	1,705	1,801	2,334
7. Whooping-cough	8,205	11,826	11,808	3,769	5,331	5,441	4,436	6,495	6,367
8. Typhus	2,900	3,328	3,787	1,431	1,683	1,850	1,469	1,645	1,937
9. Erysipelas	638	601	563	300	295	280	338	306	283
11. Carbuncle	4	3	4	1	2	—	3	1	4
12. Influenza	391	259	320	215	146	188	176	113	132
13. Dysentery	427	583	410	244	319	236	183	264	174
14. Diarrhœa	6,913	15,012	8,349	3,784	8,052	4,474	3,129	6,960	3,875
15. Cholera	142	432	229	71	248	132	71	184	97
16. Ague	35	46	33	19	23	15	16	23	18
17. Remittent fever	175	99	140	105	46	59	70	53	81
18. Rheumatism	36	37	29	22	22	18	14	15	11
19. Other zymotic diseases	84	87	83	48	41	55	36	46	28
ORDER II.									
1. Syphilis	825	880	946	455	470	498	370	410	448
3. Hydrophobia	1	—	—	1	—	—	—	—	—
ORDER III.									
1. Privation	6	7	7	2	3	4	4	4	3
2. Want of breast-milk	1,002	970	1,006	519	499	535	483	471	471
3. Purpura and scurvy	128	193	158	69	103	75	59	90	83
ORDER IV.									
1. Thrush	917	1,046	899	488	559	474	429	487	425
2. Worms, &c.	121	112	116	63	41	54	58	71	62
CLASS II.—ORDER I.									
2. Dropsy	583	639	674	297	343	391	286	296	283
3. Cancer	46	33	39	23	19	19	23	14	20
4. Noma	89	135	139	30	38	49	59	97	90
5. Mortification	116	107	114	55	53	48	61	54	66
ORDER II.									
1. Scrofula	855	1,109	1,172	471	607	643	384	502	529
2. Tabes mesenterica	3,810	4,756	4,230	2,077	2,551	2,267	1,733	2,205	1,963
3. Phthisis	2,696	3,052	2,820	1,372	1,490	1,414	1,324	1,562	1,406
4. Hydrocephalus	6,162	6,734	6,201	3,644	3,926	3,729	2,518	2,808	2,472

* Some diseases which are not fatal at the early ages, are omitted from this table.

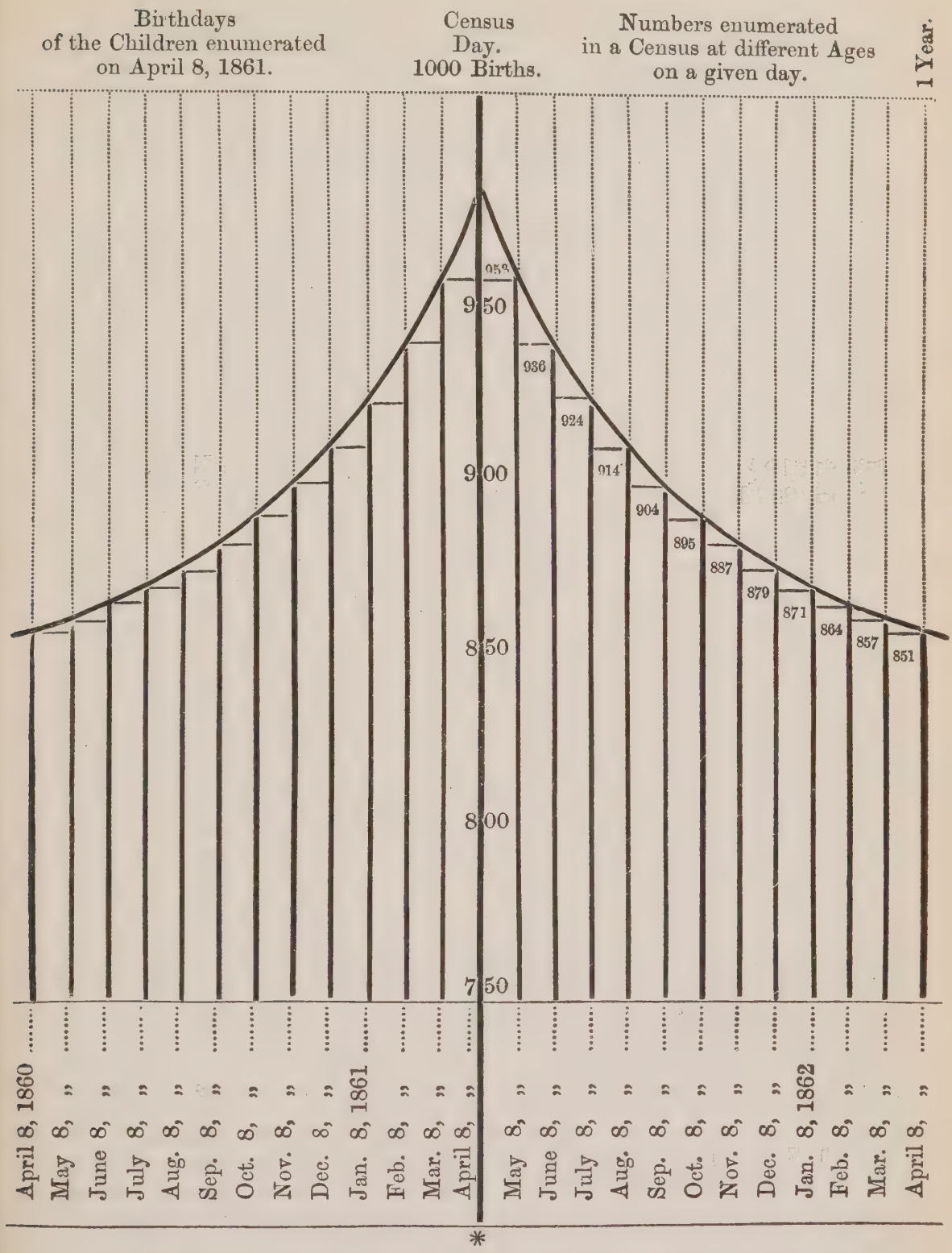
IX.—*Table showing the* Causes of Death *of* Children under Five Years of Age—*Contd.*

Diseases.	Boys and Girls.			Boys.			Girls.		
	Under 5 Years of Age.								
	1860.	1861.	1862.	1860.	1861.	1862.	1860.	1861.	1862.
CLASS III.—Order I.									
1. Cephalitis	1,634	1,710	1,751	870	938	966	764	772	785
2. Apoplexy	427	336	406	218	184	231	209	152	175
3. Paralysis	51	58	39	27	32	22	24	26	17
4. Insanity	3	2	2	1	2	1	2	—	1
5. Chorea	8	—	1	5	—	1	3	—	—
6. Epilepsy	121	156	167	76	97	109	45	59	58
7. Convulsions	24,769	25,040	24,856	13,961	14,267	14,164	10,808	10,773	10,692
8. Brain disease, &c.	857	946	953	478	516	501	379	430	452
Order II.									
1. Pericarditis	27	31	31	17	17	16	10	14	15
2. Aneurism	1	1	2	1	—	1	—	1	1
3. Heart disease, &c.	231	246	247	131	139	143	100	107	104
Order III.									
1. Laryngitis	797	877	1,040	467	502	590	330	375	450
2. Bronchitis	11,580	11,067	12,205	6,360	5,884	6,647	5,220	5,183	5,558
3. Pleurisy	95	77	83	56	46	47	39	31	36
4. Pneumonia	17,715	16,106	16,935	9,843	8,802	9,220	7,872	7,304	7,715
5. Asthma	17	30	21	11	22	8	6	8	13
6. Lung disease, &c.	1,166	1,292	1,590	627	715	876	539	577	714
Order IV.									
1. Gastritis	118	144	136	59	72	71	59	72	65
2. Enteritis	1,299	1,458	1,192	716	765	694	583	693	498
3. Peritonitis	189	174	172	98	96	97	91	78	75
4. Ascites	35	26	27	18	19	13	17	7	14
5. Ulceration of intestines	105	91	84	52	53	51	53	38	33
6. Hernia	61	52	54	51	43	45	10	9	9
7. Ileus	187	200	184	106	118	116	81	82	68
8. Intussusception	63	62	78	39	42	54	24	20	24
9. Stricture of intestines	7	4	8	4	3	6	3	1	2
10. Fistula	2	1	—	1	—	—	1	1	—
11. Stomach disease, &c.	403	443	373	210	254	197	193	189	176
12. Pancreas ,,	3	1	—	2	—	—	1	1	—
13. Hepatitis	49	46	37	29	26	19	20	20	18
14. Jaundice	460	511	504	275	314	303	185	197	201
15. Liver disease, &c.	113	154	125	64	84	73	49	70	52
16. Spleen ,,	12	24	23	7	12	15	5	12	8
Order V.									
1. Nephritis	31	40	40	17	23	24	14	17	16
2. Ischuria	5	3	7	—	1	5	5	2	2
3. Nephria	37	60	55	22	33	31	15	27	24
4. Diabetes	5	9	11	5	5	6	—	4	5
5. Stone	11	11	14	11	10	13	—	1	1
6. Cystitis	12	5	6	9	4	2	3	1	4
7. Kidney disease, &c.	67	76	75	44	42	41	23	34	34

IX.—*Table showing the* CAUSES OF DEATH *of* CHILDREN UNDER FIVE YEARS OF AGE—*Contd.*

Diseases.	Boys and Girls.			Boys.			Girls.		
	Under 5 Years of Age.								
	1860.	1861.	1862.	1860.	1861.	1862.	1860.	1861.	1862.
ORDER VI.									
2. Uterus disease, &c.	15	14	24	2	7	11	13	7	13
ORDER VII.									
1. Arthritis	14	6	5	3	1	3	11	5	2
2. Joint disease, &c.	154	174	157	72	85	83	82	89	74
ORDER VIII.									
1. Phlegmon	186	217	173	87	102	83	99	115	90
2. Ulcer	93	106	105	41	45	45	52	61	60
3. Skin disease, &c.	197	217	238	111	111	145	86	106	93
CLASS IV.—ORDER I.									
1. Premature birth	7,642	7,610	7,706	4,328	4,371	4,290	3,314	3,239	3,416
2. Cyanosis	386	406	426	241	235	257	145	171	169
3. Spina bifida	350	392	383	158	154	160	192	238	223
4. Other malformations	415	434	418	265	256	239	150	178	179
5. Teething	3,895	4,251	3,811	2,106	2,281	2,023	1,789	1,970	1,788
ORDER IV.									
1. Atrophy and debility	21,943	24,591	22,285	12,053	13,397	11,966	9,890	11,194	10,319
CLASS V.—ORDER I. (*Accident or Negligence.*)									
1. Fracture and contusions	321	325	352	187	200	196	134	125	156
2. Gun-shot	—	4	1	—	3	—	—	1	1
3. Cut, stab	9	4	8	7	2	6	2	2	2
4. Burns and scalds	1,635	1,560	1,537	869	876	858	766	684	679
5. Poison	106	113	119	56	66	66	50	47	53
6. Drowning	327	326	396	223	218	267	104	108	129
7. Suffocation	824	758	795	457	415	414	367	343	381
8. Otherwise	157	231	261	91	133	151	66	98	110
ORDER III.—(*Homicide.*)									
1. Murder and manslaughter	216	163	180	103	67	95	113	96	85
Other violent deaths (not classed)	2	22	16	2	16	7	—	6	9
Sudden deaths (cause unascertained)	907	814	874	478	450	457	429	364	417
Cause not specified or ill-defined	3,699	3,394	3,086	1,982	1,907	1,716	1,717	1,487	1,370
Total	166,784	181,129	178,513	90,428	97,477	96,029	76,356	83,652	82,484

Diagram representing 1,000 *Births Daily.*



The central vertical line * (ordinate) represents by its 1000 parts 1000 children assumed to be born on the Census Day:—Then the first line to the right represents the living (953), according to calculation, on May 8th; the next line the living (936) on June 8th. The last line, over April 8th, 1862, represents the living (851) at that date.

The vertical lines to the left of the central Census line represent the numbers enumerated on the Census Day of the ages 1, 2, 3, &c., months old, out of 1000 children born at the undermentioned dates. Thus, 851 of the exact age 12 months, on April 8th, 1861, were born on April 8th, 1860, and were the survivors of 1000 born on that day. The 851 are represented by the line over the date April 8th, 1860.

On Public Schools *and the* Civil Service *of* India. *By* Horace Mann, Esq.

[Read before the Statistical Society, March, 1865.]

A complaint is made that, by the present scheme of examination for the Civil Service of India, many of the best scholars in public schools are deterred from presenting themselves, because, it is said, undue weight is given to branches of knowledge foreign to the usual public school course. It may be worth while to see what light is thrown upon this question by the statistics of the last examination.

The complaint referred to cannot perhaps be more forcibly stated than in the following passage from the "Saturday Review" of October 8, 1864, the substance of which was reported in the number which appeared on the 4th instant :—

"Any one who will look at the list of candidates, and at the marks obtained by the more successful ones, will easily see how it is that the more promising boys at public schools are shut out from an Indian career. A schoolboy of eighteen or nineteen who has worked hard in a public school has acquired a good deal of one sort of knowledge, and very little of other sorts of knowledge. He knows Latin and Greek thoroughly well for his age; he knows a little mathematics; he knows the histories of Greece, Rome, and England in some detail; he has been accustomed to read something of most English poets; and he can translate, if he cannot speak, French and German. But there are other branches of human knowledge of which he is totally ignorant. He knows nothing of Sanscrit, Arabic, or Persian. He is ignorant of the systems of the leading Scotch metaphysicians. He is not a geologist, or a chemist, or a botanist. But when he begins to think what he is to do in life, and calculates whether it is worth his while to try for an Indian appointment, he is staggered to find that the successful candidates must have been educated in a very different way from that in which he himself has been educated. They do not seem to have gone very high in anything, but the quantity of subjects in which they are prepared to compete is overwhelming. They all know Sanscrit, and moral philosophy, and all modern languages, and all the 'ologies. This will not do for him, and he considers whether it will answer for him to qualify himself for the examination, or whether he had better abandon all thoughts of competing. He finds that, if he wishes to have any hope of success, he must change altogether his manner of life and his habits of study. He must leave his public school, he must give up the notion of going to a university. He must go to a special sort of private tutor, who manipulates an apparatus for getting young men very quickly and very superficially acquainted with a great variety of subjects. He had better give up classics and anything like a thorough study of history, for he can do better with his time than continue to advance where he has already made progress. He can begin at once to learn Sanscrit, Arabic, Italian, moral philosophy, psychology, botany, chemistry, geology, and Anglo-Saxon derivations. In fact, if he wants to succeed, he must throw himself into this sea of miscellaneous smattering.

"The only effect of the present system of examination is to exclude the best and most promising lads at public schools from the competition."

The case thus presented raises two main questions, each of which may receive a certain amount of statistical illustration.

I. What, according to the theory of the scheme of examination framed, in 1854, by the Committee known as Lord Macaulay's Committee, are the chances of success for a candidate who is educated according to the ordinary public school course?

II. What have been the results of the working of that scheme with reference to the supply of candidates from public schools?

I. Lord Macaulay's scheme provides for an examination in eleven subjects, the candidate being at liberty to offer as many or as few of these as he likes. To each of these subjects a numerical value is assigned, the chief ground of difference in the values being, we may assume, the different amount of time and effort, and capacity required to attain a certain proficiency in them. These eleven subjects and their respective values are now as follows—the only difference between the scheme as it now stands and as it was framed in 1854 being, an addition of 250 marks for mathematics, which then had 1,000 and now has 1,250 marks allotted to it :—

		Marks.
1. English	composition ..... 500 literature and history 1,000	1,500
2. Greek		750
3. Latin		750
4. French		375
5. German		375
6. Italian		375
7. Sanskrit		375
8. Arabic		375
9. Mathematics		1,250
10. Moral science		500
11. Natural science		500
		7,125

It must be understood, at starting, that this scheme was purposely framed so as not to give to any place or system of education an undue monopoly of the prizes. "The marks," say Lord Macaulay and his colleagues, "ought, we conceive, to be distributed among "the subjects in such a manner that no part of the kingdom and no "class of schools shall exclusively furnish servants to the East India "Company." Skill in Greek and Latin versification was to have its proper weight; but the want of such skill might be supplied by a knowledge of other matters. Proficiency in the subjects taught at Oxford and Cambridge was to be adequately rewarded; but the different studies of the Scottish Universities were also to be properly valued. The list of subjects was therefore selected, and the marks for each subject were assigned, with this liberal view of opening a fair field to all the educational institutions of the country, and of

ensuring that, however widely the course of one school might vary from that of another, the best scholars of each should have nearly equal chances of success. "A candidate," say the reporters, "who "is at once a distinguished classical scholar and a distinguished "mathematician will be, as he ought to be, certain of success. A "classical scholar who is no mathematician, or a mathematician who "is no classical scholar, will be certain of success if he is well read "in the history and literature of his own country. A young man "who has scarcely any knowledge of mathematics, little Latin, and "no Greek, may pass such an examination in English, French, "Italian, German, Geology, and Chemistry, that he may stand at "the head of the list."

It was, therefore, the deliberate intention of the framers of the scheme, while they recognized the claims of those who were well educated according to the public school pattern, not to exclude from the competitions those who might be able to show equal capacity, though educated after a different model; and I do not understand that the propriety of thus making the field of competition free to merit, of whatever order, is openly disputed. The ostensible complaint is, that capacity trained by the public school method is placed by the scheme at a disadvantage in comparison with inferior capacity trained by other methods, and it is with reference to this complaint that I propose to lay before the Society a few facts and figures.

In the first place, considering the mere *number* of subjects which may be offered, it is said that the candidate who restricts himself to the public school course is limited to five or six subjects, at most, while his opponent may bring up as many more as he can find time to study superficially. As to this, the question at once arises—considering the scheme in the abstract—can there be any advantage in taking up many subjects rather than a few, if those few afford ample scope for all a candidate's ability and industry? Classics alone, it may be said, present a field of study too wide to be cultivated wholly, even by the ablest and most assiduous student: how then can a candidate obtain more fruit by attempting to cultivate several fields in addition? To which, I suppose, the reply is, that the framers of the scheme—either because the partial cultivation of several fields is the universal practice in schools, or because it seemed best for their purpose, or for other reasons—thought fit to limit the reward payable for classics to 1,500 marks, a number which is insufficient by itself to ensure success in the competition. But if with classics be combined English, the number of marks offered is raised to 3,000, and if mathematics be added the number is 4,250; the former number having been rarely, and the latter number having been never yet, attained by any candidate in the examinations. So that, on abstract grounds, as these three or four subjects offer both a range and a

reward beyond what is within a young man's power to cover and obtain, there can be no use, it would seem, in taking up a greater number of subjects and thus extending an already unmanageable field and adding to the unattainable portion of the prize.

But this, it may be answered, assumes the existence of a process of marking so exact as to be quite beyond reach; whereas, judging from the way in which the marks have hitherto been, and are likely to be, awarded, it is evident that, after a certain proficiency in one subject has been attained, more is to be gained by attacking a new subject than by deepening acquaintance with the old. But, regarding the question from this point of view, it must still be observed that although every candidate is at liberty to take up any number of subjects, there is a practical limitation imposed by his inability to pay attention, with any prospect of benefit, to more than a certain number, under any plan of marking. Perhaps two or three persons every year might be able to stand an examination in eight or nine subjects; but the great majority are obliged to restrict themselves to five or six. Thus, of the 40 who were successful at the last examination, 2 took up four subjects; 6 took up five subjects; 19 took up six subjects; 7 took up seven subjects; 4 took up eight subjects; and 2 took up nine subjects. But in some cases a subject taken up was totally unremunerative, in consequence of the rule by which no marks are allowed for a mere smattering of knowledge; and if we omit these ineffective subjects, the corrected statement will be as follows:—

4	Candidates	succeeded	with four	subjects.
13	,,	,,	five	,,
15	,,	,,	six	,,
6	,,	,,	seven	,,
1	,,	,,	eight	,,
1	,,	,,	nine	,,
40				

It appears, therefore, that 38 out of 40 selected candidates succeeded with seven or fewer than seven subjects; 32 with six, or fewer than six subjects; and 17 with five or fewer than five subjects; so that, practically, a candidate who is prepared in six, or even in five, subjects, is amply provided for the contest with his competitors; assuming that these five or six subjects are well selected, with reference to the number of marks assigned to each, and that a given number of marks may be gained with equal facility in these subjects as in the others. Of course, there may be a question whether this latter assumption is always realized; but as there is at least no reason why it should not be, the prospects of different kinds of candidates under the scheme of Lord Macaulay and his colleagues may be usefully discussed upon

this basis. Until recently, there seems to have been more difficulty in gaining marks in mathematics than in other subjects; but from a paragraph in the last report of the Civil Service Commissioners, it may be inferred that, in future, the mathematical papers will be better adapted to the average acquirements of the class of persons who offer themselves as candidates; and there is no reason for supposing that the principle upon which the Commissioners act with regard to this subject will not equally guide them with respect to other subjects.

Taking, then, five or six subjects as a sufficient number to ensure the success of a moderately industrious and able candidate, let us see what are the subjects which a public school candidate could select, and what is the value of them as a means of gaining marks.

Nearly all public schools include in their course Greek, Latin, and mathematics, and most of them now add French or German. Though English is not often, perhaps, formally taught to any considerable extent, we may assume that this is not because it is supposed that an English youth of the higher class can be called really educated without a fair knowledge of his own country's language, literature, and history, but because it is taken for granted that these have been, or will be studied apart from, and as not being inconsistent with, the ordinary school course. There are, therefore, five subjects which in the usual routine of study, or at least without hindrance to it, a public school candidate may take up; and the marks obtainable from these five subjects are—

	Marks.
English	1,500
Greek	750
Latin	750
Mathematics	1,250
French or German	375
	4,625

making a total of 4,625; the other subjects of the scheme, and the marks assigned to them being—

	Marks.
French or German	375
Italian	375
Sanskrit	375
Arabic	375
Natural science	500
Moral science	500
	2,500

At some schools, no doubt, the course of instruction is more

limited than is here assumed, as at Eton, where it is virtually confined to Greek and Latin. But, unless it can be maintained that the range above referred to (which is not wider than that which exists in many schools, or than that which is recommended by the Public Schools Commissioners for general adoption*) is incompatible with the best public school education, this argument of the text will hold good. It would obviously be impossible to regard as a grievance to a particular public school, an ill success attributable to the narrowness of its range of tuition, as compared with that of its rivals.

The position, therefore, of a candidate educated at a public school, and confining himself to the five subjects which form or might form part of the usual public school education with reference to a competitor, who need not so restrict himself, is this. If the latter take only five subjects, the maxima available for them may be 4,750 against the public school candidate's 4,625; if he take six subjects, his maxima may be 5,250 against the public school candidate's 4,625; and if he take seven subjects, his maxima may be 5,625 against the public school candidate's 4,625. This numerical advantage could be gained by his taking up moral science and natural science, which are not included in the ordinary public school course, and which have 500 marks allotted to each.

Practically, however, it is found that very few of the candidates who bring up more than five subjects do so select them as to raise their aggregate maximum above the 4,625 which are appropriated to the five public school subjects. For example—of the candidates who offered six effective subjects at the last examination, only two candidates chose such a group of six as possessed a larger aggregate than this number; the details being as follows:—

In 2 cases	the maxima amounted to	5,125
„ 4 cases	„	4,250
„ 7 „	„	4,125
„ 1 case	„	3,875
„ 1 „	„	3,750
15	Average.....	4,250

Even of those who offered as many as seven subjects, only *one* so chose his seven as to accumulate a maximum exceeding 4,625.

* "In addition to the study of the classics and to religious teaching, every boy "who passes through the school should receive instruction in arithmetic and "mathematics; in one modern language at least, which should be either French or "German; in some one branch at least of natural science; and in either drawing "or music. Care should also be taken to ensure that the boys acquire a good "general knowledge of geography and of ancient history, some acquaintance with "modern history, and a command of pure grammatical English."—"Report of "Public School Commissioners," p. 53.

Thus—

In 1	case the maxima amounted to	.....	4,750
,, 2	cases ,,	.....	4,625
,, 3	,, ,,	.....	4,500
6	Average.....	.....	4,583

Taking, then, the facts of the last examination as indicating the way in which candidates who travel out of the usual public school course are likely to use their choice, it will appear that out of forty successful candidates, not more than *five* will so arrange their reading as to have a larger aggregate maximum of marks for their subjects than the 4,625 appropriated to those which a youth from a public school might offer without interruption to his public school studies. In other words, a candidate from a public school may reasonably anticipate that only one out of every eight of the competitors will have a larger number of marks to draw upon than he has himself. Whether marks might be gained with less effort in some subjects than others, and in the non-public school subjects than in the public school subjects, is, as I have said, a distinct question. If such were the case, the result, whether good or bad, would be attributable to the manipulation of the scheme of examination—not to the scheme itself. I am now supposing that a definite amount of intellectual power and effort would be equally rewarded, whether put forth upon the public school subjects or upon the rest, up to the point which is represented by the maximum of marks assigned for each. The possibility, at least, of this equality of recompense is not an unreasonable supposition; and at present we are considering what are the chances which the scheme offers—not what are the results which it has achieved.

Another mode of gaining a fair idea of the chances in favour of a public school candidate in these competitions is, to compare the maxima of marks allotted to the public school subjects with the number of marks which may be expected to be sufficient to ensure a place amongst the successful. If the latter number might be assumed to be small in comparison with the former, it can hardly be doubted that the promising public school candidate's chances are by no means unfavourable. Well,—assuming, as seems justifiable, that the number of appointments to be offered annually in future will be forty—a tolerably fair hypothetical minimum may be obtained by reference to the number of marks usually gained by the fortieth candidate in order of merit. This number during the last ten years has been as follows:—

In 1855	.....	805	
,, '56	.....	1,156	
,, '57	.....	876	
,, '58	.....	1,173	
,, '59	.....	1,711	
In 1860	.....	1,631	
,, '61	.....	1,557	
,, '62	.....	1,496	
,, '63	.....	1,603	
,, '64	.....	1,706	

It seems reasonable, therefore, to suppose that any candidate who could rely on his ability to acquire between 1,700 and 2,000 marks might deem himself tolerably secure; and as the aggregate number of marks belonging to the public school subjects is as large as 4,625, there ought clearly, with the scale of marking which might be expected, to be no difficulty in the way of a "promising" public school candidate in reaching at least the former number. In fact, as will be shown presently, this point has been reached by not a few candidates with the help of the public school subjects alone; and these candidates could doubtless have augmented their score in this division of the scheme if they had chosen to concentrate upon it the whole of their time and energies, part of which was employed upon subjects included in the other division.

The results, then, of this portion of the inquiry, viz.: as to the chances offered by the scheme, are—

(*a.*) That three-fourths of the successful competitors will be practically limited to six, or fewer than six, subjects:

(*b.*) That nearly half of the successful candidates will be practically limited to five, or fewer than five, subjects:

(*c.*) That the five subjects which a public school candidate may take up, without prejudice to the usual public school course, will yield an aggregate maximum equal to, or greater than that which will result from the subjects likely to be chosen by seven-eighths of the competitors:

(*d.*) That, on the assumption of a yearly demand for forty appointments, the number of marks sufficient to ensure success will, in all probability, be so few as compared with the maximum number assigned to the public school subjects, that no really promising scholar from a public school could fail of success.

II. Passing now from this view of the prospect which the scheme, apart from the mode in which it may be worked, seems to offer to public school candidates, I come to inquire what have been its actual results.

First, then—the statement being that, in order to be successful, a candidate must throw himself into a sea of miscellaneous smattering, abandon classics, and get very superficially acquainted with a great variety of subjects—it may be worth while to see how many, if any, of the successful candidates in 1864 succeeded by means of those subjects alone which may be taught in public schools. Some—indeed the majority—of the candidates were examined in subjects not included in the ordinary public school course; but, for the present purpose, these additional subjects may be ignored, leaving only those marks to be counted which were obtained from English, Greek, Latin, mathematics, and one modern language—being the subjects either taught at public schools or not incompatible with

due attention to the public school course. The result is, that, even when deprived of a portion of their marks (and being thus placed in the same position as if they had wasted the time bestowed upon the subjects by means of which this portion was gained), as many as *twenty* out of the forty would still have been successful. The following table shows this in detail :—

Number of Public School Subjects Taken up.	Number of Marks for the Public School Subjects.	Age of Candidate.	Number of Public School Subjects Taken up.	Number of Marks for the Public School Subjects.	Age of Candidate.
5	2,257	18	5	1,819	18
4	2,046	21	3	1,814	19
4	2,037	21	4	1,804	19
4	1,993	18	4	1,782	18
4	1,976	21	4	1,764	21
			4	1,752	19
4	1,931	19	4	1738	18
4	1,887	18	4	1,726	19
3	1,850	20	4	1,724	19
4	1,848	20	4	1,711	20
4	1,842	21	4	1,710	21

Twenty-one, therefore, of the forty successful candidates would still have succeeded, even if they had been examined in nothing beyond what a candidate educated at Harrow or Rugby might be expected to know ; unless, indeed, the study of the language, literature, and history of his native country is to be regarded as wholly incompatible with a classical education. The remaining twenty did not obtain, from the public school subjects alone, enough marks to carry success. Whether they, or any of them, would have done so, had they applied to these subjects the time devoted to the others, is, of course, matter for conjecture ; but it is at least very probable that, as to the majority of them, this would have been the case, and that as many as thirty out of the forty would still have been upon the list of prizemen if they had chosen to limit themselves to what is, or might be, the public school range.

It is not, however, intended to imply that the twenty candidates who actually succeeded upon public school subjects came to the examination-room direct from public schools. Most of them had received more or less of a university training. But I do not understand the objection to be, that public school boys cannot successfully compete *while they are public school boys*, but that no candidate educated as a public school boy is educated, whether at school or university, has a fair chance. The complaint is that India does not get the best specimens of English youth; and it is not, I imagine, implied that a public school boy is rendered less eligible if he proceeds to one of the universities.

A question, however, may be started, whether the facts of the examinations show that a public school candidate is likely, with his more limited range of study, to win his prize *as soon* as a candidate who goes out of that range. It would, no doubt, be regarded as a grievance, though of minor importance, if of two promising candidates, equal in capacity and commencing preparation at the same time, the public school candidate should not be able to secure his appointment till a year or two after his rival's success. Upon this point it may be observed, that of the twenty-one above-mentioned, six had not attained the age of 19, and that eleven were under 20 years of age; so that success might evidently be secured by candidates presenting themselves direct from the public schools (if this were an object of importance) as well as by those who might supplement their public school teaching at one of the universities. Again, the entire number of successful candidates under 19 years of age was ten, and of these six would have won upon public school subjects alone: the number between 19 and 20 was eleven, and of these five would have won upon their public school subjects alone. For aught, therefore, that appears, not only has a promising candidate who restricts himself to the public school course as good a chance of getting on the list of prizemen as a candidate who departs in some respects from that course, but he has also as good a chance at as early an age.

The question, therefore, between the two descriptions of promising candidates, those who do and those who do not confine themselves to the five subjects of the public school course, seems to be reduced, for the most part, to one of relative position on the list of winners; and it remains to be seen whether, from the statistics of the examination, we can infer what is the degree of likelihood that a candidate who restricted himself to the public school course would, though absolutely successful, suffer a loss of rank in comparison with his unrestricted rivals. Upon this point the following table may afford some help, as showing the difference in the number of marks obtained by the candidates, according to the different number of subjects taken up:—

Number of Subjects for which Marks were Gained.	Number of Candidates to each Number of Subjects.	Aggregate Number of Marks Obtained by each Group of Candidates.	Average Number of Marks Obtained by each Candidate.
Four	4	7,370	1,842
Five.....	13	25,341	1,949
Six	15	30,835	2,056
Seven	6	13,035	2,172
Eight	1	2,796	2,796
Nine.....	1	2,050	2,050
	40	81,427	2,057

As far as can be inferred from this table, it appears that the candidates who take up six subjects generally obtain more marks than those who take up five; and those who take up seven, more than those who take up fewer than seven. As to the chances with eight or nine subjects, nothing can be inferred from the solitary case of each kind which occurred. In respect, therefore, of gaining rank in the order of merit, there seems to be, as the scheme is practically worked, a slight advantage to candidates taking up six or seven subjects over those who take up fewer. It is possible, of course, though not likely, that this advantage may be solely due to the greater capacity and industry of the candidates who took up the larger number of subjects; but if the men of one group were about on a level, as to power and assiduity, with the men of another group, the inference from the figures is, that marks have been more easily obtained in some subjects than in others.

The statistics of the examinations do not of themselves enable us to decide whether, in point of fact, there has been this kind of difference between the subjects of the scheme; as an essential element in the question is, of course, the comparative amount of time devoted to the study of each. It may be worth while, however, to see, with respect to what may be called the non-public school subjects, whether from year to year there has been such an increase in the proportion of candidates by whom they have been offered as might be expected if time devoted to them had received a greater proportional reward in marks than if expended upon the rest of the scheme. The following table, therefore, shows the percentage of candidates by whom the subjects in question were offered :—

Year.	Percentage of all the Candidates who took up the undermentioned Subjects.					
	German.	Italian.	Sanskrit.	Arabic.	Moral Science.	Natural Science.
1855	12·5	8·0	0·9	0·9	53·6	26·8
'56	21·4	16·1	1·8	—	46·4	21·4
'57	31·7	21·7	3·3	3·3	45·0	25·0
'58	14·9	16·4	3·0	4·5	50·7	23·0
'59	21·0	26·0	8·4	3·3	40·3	31·1
1860	27·9	27·9	13·6	3·9	39·0	32·5
'61	30·9	31·6	21·1	6·4	48·0	25·7
'62	31·2	25·1	32·7	8·2	43·9	33·9
'63	33·9	24·3	42·9	12·2	52·9	35·4
'64	27·4	17·8	47·5	12·8	47·0	26·9

Some of these subjects, therefore, have become more popular than they were, though others have fallen off in popularity; and, on the whole, with the exception of the oriental languages, the changes

in the proportions are hardly such as to indicate any striking permanent difference in favour of these over the rest, as regards the easier acquisition of marks. Various motives, too, may have led to the increase, especially as to Sanskrit and Arabic, which, being also included in the scheme for the further examination that all successful candidates have to pass, may in many cases have been studied in preference to other subjects, for the sake of the economy of time which would be effected if the student should be successful. It should also be mentioned that the maxima for Sanskrit and Arabic were, in 1859, raised from 375 to 500, at which they remained until the last examination, when they were reduced to 375 again.

The facts in the preceding table relate to the entire number of candidates examined, successful and unsuccessful together. The following table shows the same kind of facts with respect to the former class alone:—

Year.	Percentage of Successful Candidates who took up the undermentioned Subjects.					
	German.	Italian.	Sanskrit.	Arabic.	Moral Science.	Natural Science.
1855	25·0	25·0	—	5·0	70·0	15·0
'56	23·8	9·5	—	—	61·9	19·0
'57	50·0	16·7	16·7	—	66·7	33·3
'58	25·0	40·0	10·0	5·0	75·0	20·0
'59	27·5	35·0	10·0	7·5	50·0	25·0
1860	36·3	38·7	23·7	3·7	50·0	30·0
'61	28·7	38·7	37·5	6·2	52·5	23·7
'62	41·3	26·3	41·2	7·5	53·7	26·3
'63	58·3	28·3	53·3	13·3	66·6	31·6
'64	35·0	22·5	67·5	20·0	52·5	25·0

One conclusion, at all events, is evident from the facts upon which this table is based; viz., that the statement that "*all* the "successful candidates know Sanskrit, and moral philosophy, and all "modern languages, and all the ologies," is far from accurate; the case having really been that, of the forty successful candidates, the number who offered these subjects was:—

Sanskrit	27	of whom	2	failed to obtain any marks.
Moral science	21	,,	5	,,
German	14	,,	2	,,
Natural science	10	,,	5	,,
Italian	9	,,	2	,,
Arabic	8			

This seems also to confirm the inference drawn from the preceding table, that if these subjects are more easily studied than the others, the advantage has not been sufficient to affect materially

the result of the competitions. This may be partly owing to the measures adopted by the Civil Service Commissioners for the discouragement of superficial acquirements; the rule in force in 1864 being, that no reward at all was to be given for mere elementary knowledge, which, for this purpose, was represented in some cases by a tenth and in other cases by a sixth, a fourth, or a half of the maximum; the heaviest penalty falling upon the non-public school subjects. An idea of the effect of this rule may be obtained by reference to the following statement of the number of candidates at the last examination, whose marks were annulled as being fewer than the minimum number required:—

	Number of Candidates Examined in each Subject.	Number of Candidates whose Marks were annulled as not sufficient to indicate a Competent Knowledge.		
		Successful.	Unsuccessful.	Total.
English composition	216	—	17	17
„ literature, &c.	218	—	19	19
Greek	156	—	49	49
Latin	198	—	18	18
French	186	2	87	89
German	60	2	20	22
Italian	39	2	28	30
Pure mathematics	52	2	15	17
Mixed „	40	2	12	14
Natural science	59	5	40	45
Moral „	103	5	63	68
Sanskrit	104	2	30	32
Arabic	28	—	2	2

In all these cases the particular subject was utterly useless to the candidate, and the time bestowed upon it was thrown away. The discouragement, therefore, to mere smatterers is very considerable; and it may be fully expected that, if further measures are necessary, they will be devised by the Civil Service Commissioners, in order that a given amount of talents and application may not be better recompensed if spread over a wide surface than if concentrated upon a more limited but adequate range.

But, while the non-public school subjects do not appear to have become so increasingly popular as might have been expected, if they had been much overvalued, what, it may be asked, is the case as to classics? Have they received less attention than formerly, as might be expected if they had been undervalued? The following table shows both the proportion of candidates examined in classics in each year, and the relative value of their attainments, so far as this can be indicated by marks.

1	2	3	4	5	6	7	8	9	10	11	12
	Proportion per Cent. of Candidates who took up				Aggregate Number of Marks Obtained by those among the First Forty who took up Classics.			Average Number of Marks Obtained by those among the First Forty who took up Classics.			
	Greek.		Latin.								
Year.	Of the Total Candidates.	Of the First Forty Candidates.	Of the Total Candidates.	Of the First Forty Candidates.	Greek.	Latin.	Greek and Latin.	Greek.	Latin.	Greek and Latin.	Proportion which the Marks in Column 8 bear to the Total Number of Marks Obtained by the same Candidates in all Subjects.
											Per cnt.
1855	—	85·0	—	90·0	9,851	10,387	20,238	290	288	562	46·2
'56	82·1	87·5	92·8	97·5	11,245	14,691	25,936	321	376	665	37·7
'57	83·3	85·0	88·3	90·0	13,136	12,400	25,536	386	344	709	46·0
'58	79·1	95·0	88·1	97·5	12,602	15,546	28,148	332	399	722	42·6
'59	72·3	92·5	86·5	97·5	13,575	14,097	27,672	367	361	710	34·7
1860	74·6	85·0	87·1	92·5	11,634	13,488	25,122	342	364	679	34·0
'61	80·7	90·0	93·4	97·5	9,657	16,011	25,668	268	410	658	34·5
'62	69·6	77·5	90·0	95·0	12,755	11,767	24,522	411	310	645	36·4
'63	66·1	90·0	84·1	95·0	12,583	12,057	24,640	350	317	648	34·3
'64	71·2	82·5	90·4	97·5	10,030	16,557	26,587	304	425	682	33·4

Of course, these figures must be considered in connection with possible variations in the character of the examinations, arising either from an increase or diminution in the difficulty of the papers, or from a difference in the standard by which different examiners may have apportioned the marks. The degree and the direction in which the marks may have been influenced by the former of these considerations may be estimated, as the papers are printed, by any one who compares them together; but the yearly variations (if any) of standard cannot, I fear, be accurately measured. Perhaps, on the whole, the classical papers have been easier, and the marks have been granted with more facility, in the later than in the earlier years. On the other hand, it must be considered that the examination in the first year of all (1855) was so exceptional in its character as to render it scarcely suitable for the purpose of comparison; and it must be remembered that the average age at which candidates are now examined is considerably lower than was the case in 1855, and the three or four succeeding years. On the whole, therefore, the table may probably be taken to show that, while the number of candidates who do not offer classics has increased, the number of those who succeed without the aid of classics has not increased; nor has there been any noticeable change in the extent of the classical attainments of the successful candidates. The last column shows, indeed, that the weight of a given amount of classical knowledge, in determining the success of a candidate, is somewhat less than it has been in some former years, but the difference is hardly greater than might have been expected to show itself as the influence

of the new system would become gradually felt beyond the limits of the principal universities, in schools and colleges distinguished by a more varied course of study.

The preceding figures can hardly fail, I hope, to throw some light upon the question of chances afforded to Public Schools by these Examinations: but in order to estimate their real value for this purpose it is necessary to consider an objection. The question raised is—what is the chance afforded by these examinations to the most promising of the young men educated on the public school pattern? What the figures show is, that a half, certainly, and probably three-fourths, of the candidates, might have succeeded if they had been examined in no more than five subjects, all of which are appropriate subjects for public schools, and might, according to the Public Schools Commissioners, be with advantage taught in them. But this is not necessarily the same thing as proving that so many candidates *educated upon the public school pattern* may succeed. Admitting (it may be said), that these five subjects are or might be studied at public schools, and that, in order to succeed in the competitions it is not necessary to study any others, it must be further proved that such success is compatible with the amount and mode of study adopted at public schools, or that in these respects the public schools might change for the better. Some of the subjects, (it may be urged), as English and the modern languages, &c., are, at private schools and other places, studied to a greater extent than in public schools, and in a manner which, while more superficial, enables specially prepared candidates to gain marks more easily than they can be gained by public school boys.

It is difficult to say what weight is due to these considerations, for, in the first place, as they relate to the methods of rival instructors, they can hardly be valued according to the opinions of the persons interested, and, in the second place, it is impossible from the tables of marks to say that the superiority which specially prepared candidates may exhibit in English and some other subjects, may not be due to a greater amount of attention bestowed upon this class of students by their tutors, or even to more efficient instruction of a perfectly legitimate kind. So far, indeed, as the *extent* of the study is concerned, it is clear that if one class of students devoted more time to English and a modern language than did the other class, they must, on the supposition of equal industry, have devoted less time to classics and mathematics; and so there would be some compensation. But if the fact should be, as alleged, that some of those who succeeded owed their success partly to advantages obtained by a process of "cramming," which the public schools do not countenance, and cannot be expected to countenance, this would of course render the table a somewhat excessive repre-

sentation of the total number of public school candidates who may gain appointments under the present system. As to the "best "public school boys," however, the question is not whether they are able, under existing arrangements, to get marks in English and modern languages with the same facility as their "crammed" competitors, but whether they are able to get enough to ensure success; and of their ability to do this there appears to be no reasonable doubt.* Of course, the fact that the best public school boys might succeed in spite of a disadvantage, is no reason why moderately able public school boys should be defeated by inferior candidates in consequence of this disadvantage; and if such a result really happens it must, no doubt, be regarded as a proof that the measures adopted by the Civil Service Commissioners for securing perfect equality in the conditions of the contest need to be made more effective, as, if this becomes apparent, they no doubt, will be.

The result of this inquiry, which I have purposely confined to the precise point suggested in the quoted criticism, viz., the prospects of the "most promising" boys from public schools seems to be:—

1. That the scheme of examination, as designed by Lord Macaulay and his colleagues, is by no means unfavourable to candidates "thoroughly well trained upon the public school pattern," unless they confine their studies within a narrower range than that which a good public school might be expected, according to the Public School Commissioners, to provide; and—

2. That, whether or not, in the practical working of the scheme, the discouragement to merely superficial acquirements has hitherto been sufficiently heavy, there is still no reason why, if well instructed in an adequate range of study, the best of the public school boys should not be certain of success.

Consequently, if the best productions of public schools are not found frequently on the list of successful candidates, the main

* What can be done by promising public school boys, under the scheme as now worked, may be seen on reference to the table of the results of the competition under notice; the candidate who gained the third place in order of merit being a public school boy, 18 years old, from Wimborne Grammar School. He obtained 2,402 out of the very five subjects referred to, with the addition of Moral Science. Even without the last subject, he would have stood sixth, with 2,257 marks, viz.:—

In English	706
„ Greek	423
„ Latin	570
„ French	293
„ mathematics	265
	2,257

What has been done in this instance might, it is natural to suppose, be done in other cases by other of the "best and most promising lads at public schools."

reasons must be sought for elsewhere than in the plan or the conduct of the examinations. Whether one of these reasons may not be a diminution in the attractiveness of an Indian career, in proportion as new openings for ability have been created at home, is an important question, to which I cannot now attempt any reply. If Professor Rogers, or some other competent authority, would favour the Society with the most recent statistics of the number of scholarships and fellowships which are now within the reach of the most promising public school boys, we might perhaps perceive one source, at least, of counter attraction sufficient to deter many eligible candidates from competing for the Civil Service of India. And to this one deterring influence others, of considerable force, might doubtless be added; such as that of the vast increase of wealth in this country, diminishing the motives to exertion—that of the inducements which literature, as a profession, offers to young men of capacity and culture—and various others, amply sufficient to account for a paucity of candidates from the ranks of the very ablest of the public school youth of England.

I will only add a few words and figures as to the effects of any change, such as has been advocated in the scheme of examination, by which candidates would be arbitrarily restricted to a certain number of subjects, or be required to show a certain proficiency in classics, or receive less credit for ability and effort bestowed upon the non-public school subjects than for the same ability and effort bestowed upon classics and mathematics.

If there is any force in the preceding part of this paper, it must be evident that, apart from an undue reward paid for superficial knowledge, or for such a simulation of knowledge as results from what is understood as "cramming," there is no inducement to a candidate to occupy himself with many subjects rather than with four or five. But the natural antagonist of the "crammer" is the examiner; and it is yet to be proved that the skill of the latter is inadequate to the task of baffling the former. The Civil Service Commissioners, too, have shown themselves to be quite alive to the necessity of distinguishing real from fictitious knowledge; and there is no reason to suppose that they are yet at the end of their resources for accomplishing that object. For the purpose, therefore, of giving the well-instructed public school candidates an equal chance with others, there is no need of such violent changes in Lord Macaulay's scheme as would be made if either of the above-mentioned recommendations were adopted. But what such changes might effect is, a monopoly of the appointments by candidates trained according to one pattern, instead of a fair competition between candidates trained according to various patterns. I would by no means undervalue the many benefits of a public school education; but the question is not exclu-

sively between education in public schools and education in private schools, but also between different plans of instruction in public schools—whether success shall be possible only on one plan, or whether rival plans shall have a fair chance. It must not be assumed that all who do not limit themselves to the old public school course are, therefore, educated in private establishments. Out of forty candidates selected at the last examination, thirty-four had been, during some portion of their youth, at public schools of more or less celebrity (most of them proceeding afterwards to some university), and five out of the remaining six had been at some university. Of the 376 young men sent to India since the commencement of the system of open competition, in 1855, no fewer than 316 had been at some university, and only 12 of the residue had been educated exclusively at private schools or by private tutors. So far, therefore, as the moral benefits of a public school training are concerned, these are received by the students of Sanskrit and natural science as well as by the students of classics and mathematics. It comes really to the simple question, whether those who, in addition to, or in substitution for, the course of instruction which, until lately, was distinctive of public schools, choose to study modern and oriental languages and natural and moral science, or some of these subjects, shall be allowed to compete for the Civil Service of India upon equal terms with other candidates. It can hardly be assumed that there is any necessary superiority in the old system of public school instruction; perhaps, indeed, the presumption arising from its antiquity might by some be supposed to be against it. But, without going this length, it may at least be supposed that many young men of remarkable capacity are and will be educated upon a different system, either wholly or partially; and the effect of any plan by which the competition would be confined to those educated upon the ancient plan would be to exclude from the Civil Service of India one class of able candidates, without securing the admission of able candidates of the other class.* The best public school boys would

* An illustration of this point is opportunely supplied by a paragraph in a recent number of the "Friend of India," referring, in highly complimentary terms, to the abilities and services of Mr. C. U. Aitchison, who has just been transferred from the appointment of Under Secretary in the Foreign Department to that of Deputy Commissioner in the Punjab. "For a considerable time," it is stated, "he acted as Foreign Secretary, and discharged the duties of the most responsible "office in India so well that, in a formal minute, Lord Canning declared that his "standing in the service alone disqualified him from permanently filling the "appointment." Mr. Aitchison stood sixth in the list of successful candidates in the competition of 1855; but his position was almost entirely due to his attainments in English, German, and moral science—his marks for Greek and Latin being very few. If a certain proficiency in classics had been essential to success, or if less weight had been attached to subjects foreign to the usual public school course, India would certainly have been deprived of the talents and services so warmly acknowledged.

still be allured, as now, by the attractions of scholarships and fellowships, and the possible prizes in the Church or at the Bar in England; and varied ability would be excluded from the Civil Service of India, only that its place might be supplied by classical mediocrity. If the scheme of examination is suffered to remain as it now stands, improved in its working, as the experience of the Civil Service Commissioners from year to year may suggest—not conferring a monopoly of its prizes upon youths trained according to one favourite pattern, but offering success to different kinds of excellence—the probabilities are strong that India will constantly attract many of the young men of high qualifications whose studies have not been wholly directed to the ordinary classical course; because, being thus shut out from most of the university prizes, they will be free from some of the temptations which lead the best scholars to decide for an English career.

And it should not be forgotten, that what is wanted in India is men of capacity more than men of learning, except so far as learning indicates capacity. The examinations for this service are not like those for university degrees, or for a physician's diploma, or for an attorney's certificate, where knowledge of the subject-matter of the examination is important for its own sake, or for the candidate's future occupation; but proficiency in one subject is, within certain limits, as valuable as proficiency in another, if it shows the existence of as much mental power. So, too, it may be argued that depth of knowledge is not of so much importance as the ability to acquire and use knowledge; and that this ability may be exhibited as much by a moderate acquaintance with many branches as by a thorough acquaintance with a few. What India requires, it may be said, is not scholars, but administrators; and, from this point of view, width may have its merits as well as depth; since if it is probable that the man of many subjects may be wanting in sustained force, it is, on the other hand, not unlikely that the man of few subjects may be wanting in quickness and versatility, qualities of some value in a public officer, much of whose usefulness may depend upon his promptitude in dealing with matters of very diverse character. This, no doubt, is an argument which cannot be pushed very far; but perhaps it may deserve more consideration than is commonly given to it.

Time does not permit any further pursuit of this inquiry; and probably enough has been said to prepare the way for a fuller discussion of the subject. My object has been, not so much to offer an argument in favour of a particular view, as to state facts and inferences which may enable others to form their judgment on the questions raised; and for this purpose it seemed best, as the field of controversy has of late been occupied exclusively by represen-

tatives of the public schools, to present my remarks in the shape of a criticism upon their complaints. Although, as I need hardly say, I represent in this paper no one but myself, I do not wish to be regarded as an advocate; and my purpose will be attained if the preceding figures and statements should throw some light upon the subject, and thus assist other persons in forming their own opinions concerning it.

MISCELLANEA.

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I.—*General Results of the Commercial and Financial History of* 1864.

The following important observations upon the commerce of the past year are taken from the *Economist* of the 11th March. They form the introduction to the mercantile history of 1863, and are followed in that paper by very full and well digested statistics of prices, trade, and finance. This information is published in a very compendious shape in the supplement to the periodical named :—

"The commercial history of 1864 is a record of the circumstances which have attended the operation of two principal sets of causes—the one set political, the other financial and mercantile. The political causes were—first, the apprehensions produced by the Schleswig-Holstein War during the first four or five months of the year; and secondly, the uncertainties occasioned in August and September and at some later periods by the apparent probability of peace between the Federal and Confederate belligerents in North America.

"The financial and mercantile causes were—first, the occurrence of three periods of pressure in the money market, namely, in January and February, when the Bank of England minimum rate of discount was maintained for three weeks at 8 per cent.; in April and May, when the rate was for a fortnight 9 per cent.; and in September and October, when for so long a period as two months the rate was again 9 per cent. In the second place, besides these periods of monetary pressure, there has prevailed once or twice great activity in the formation of new joint stock companies for home and foreign purposes, and also in the introduction of proposals for foreign loans. And in the third place, there has been towards the close of the year an opportunity of learning the actual results in practice of many of the joint stock schemes—bank, discount, finance, and trading companies—set on foot with great *éclat* of promises and premiums in the course of 1863.

"The Schleswig-Holstein war occasioned greater disturbance in foreign money markets than in those of this country. Still, so long

as it remained in any degree doubtful whether England would do more than offer diplomatic advice, the suspense and uncertainty were perplexing and hurtful. The vote of the House of Commons on the 7th of July, absolving by a majority of 18 the Palmerston Ministry from blame as regards their Danish policy, put a final end to the subject; but so early as March or April it had become tolerably certain that neither England nor France would actively intervene in the quarrel.

"The apparent rise of a powerful peace party in the Northern States of America began to attract attention in July, and the acceptance in the following month by the Chicago Convention of propositions favourable to negociation with the South, justified for some weeks the views of those who held that on both sides there was a desire to put an end to the war. The refusal of General McClellan to become a candidate for the Presidency on the Chicago conditions, and the military success of the Federal arms under Sherman at Atalanta, entirely dissipated the hopes of peace, and secured for Mr. Lincoln an almost unanimous re-election. In England, the effect of these events operated in several ways. In the first place, it was necessary to consider the probable effect of peace on the political relations between the Federal States and ourselves, and especially between those States and Canada, as the British possession nearest to them. The extreme language countenanced, if not actually employed, by Federal statesmen on the subject of the Southern cruisers, which from time to time have evaded the vigilance of our police and escaped from English ports, seemed to warrant the inference that, under the pressure of a large army released from civil war, it might be found convenient to launch it against this country. In the second place, the arrival of peace in North America would alter largely, and for some time, no small part of the trading arrangements of this country with many of its most important markets,—as, for example, India, Egypt, Brazil, and of course the whole of North America. It would also place on a new footing the cotton industry at home, the occupations related to that industry, and the prices of the raw material employed.

"The first of the three periods of monetary pressure (January and February) was occasioned wholly by the drain of gold and silver to the Levant and India, and for the payment of cotton, and to some extent by the apprehensions arising out of the Schleswig-Holstein war.

"The second period of pressure (April and May) was also occasioned by a revival of the cotton drain in a less severe form, but chiefly by disquiet occasioned by the wholesale introduction of new companies, and by the absorption of capital for the purpose of carrying on the enormous mass of enterprises launched during the preceding twelve months.

"The third period of pressure (September, October, and November), was much more severe and protracted than either of those which preceded it. The primary cause was the prospect of early peace in America, the consequent great fall in the value of cotton, and the losses and discredit entailed by that fall upon considerable departments of trade, especially upon the trades centering at Liverpool and Manchester, and upon those carried on with India. There

was also in operation, and upon a larger scale than in the earlier months of the year, the undue absorption of capital in new companies and enterprises.

"The following Table (I) will show in exact figures the progress of the causes which led to the several periods of pressure:—

I.—*Foreign Exchanges, Price of Silver, and Bank of England Rates of Discount*, 1864.

1	2	3	4	5	6	7
	London on		New York on London. 60 Days' Sight.	Calcutta on London. 6 Months' Sight.	Standard Silver in London. Per Oz.	Bank of England Rate.
	Paris 3 Months' Date.	Hamburg. 3 Months' Date.				
			Per cnt.	*d.*	*d.*	Per cnt.
2 January	25 ·72½	13 ·8½	165	26	61½	7
16 „	·75	·7½	167	„	62	8
6 February	·85	·8¼	172	27	61⅜	„
20 „	·80	·8½	173	26½	„ ¼	7
5 March	·72½	·8¼	174	„ ⅜	„ ½	6
19 „	·70	„	176	„ ⅝	„	„
2 April	·57½	·7¾	177	„ ¾	„ ¾	„
16 „	·50	·8	181	„ ⅞	„ ⅝	7
7 May	·90	·11	192	„ ⅝	61	9
21 „	·75	·9¾	193	„	60⅞	8
4 June	·67½	·8¾	193½	„ ⅛	61¼	7
18 „	·62½	·9	211	25	„ ⅜	6
2 July	·65	„	234	24⅞	„ ⅛	„
16 „	„	·8¾	260	„	„	„
13 August	·75	·10½	280	„ ¾	61	8
20 „	·70	·9¾	„	„	„ ¼	„
3 September	·67½	·9½	„	25¼	„ ⅝	9
17 „	·80	·10	273	„ ¾	„ ⅜	„
7 October	·82	„	233	„	60½	„
21 „	·85	„ ¼	209	„ ⅛	—	„
4 November	·70	·9¾	227	„	„	„
18 „	·65	„ ¼	263	„ ½	61	8
8 December	·57	·8¼	240	„ ⅜	„ ½	7
22 „	·52	·7¾	260	„	„	6

"We can trace in these columns pretty accurately the commercial history of the twelvemonth, especially in the column (5), which gives the rate of exchange at Calcutta, and in the columns (2 and 3) which give the quotations on Paris and Hamburg. Speaking generally, as the Calcutta quotation fell, the drain of specie for cotton payments diminished; and as the rate of discount (column 7) rose, so also were the quotations on Paris and Hamburg rescued from the tendency to decline which has been strongly manifested by them for some time past. The price of silver also (column 6) follows closely the Calcutta demand.

"If to Table I we add the next Table (II), giving for *each month* the *exports* of gold and silver to the East, we shall see still more

closely at what precise parts of the year the drain made itself most felt:—

II.—*Exports of Gold and Silver to the East per Peninsula and Oriental Steamers from England.*

1864.	Gold. £	Silver. £	Total. £
January	389,000	1,118,000	1,507,000
February	198,000	653,000	851,000
March	256,000	775,000	1,031,000
April	298,000	478,000	776,000
May	143,000	255,000	398,000
June	120,000	208,000	328,000
	1,404,000	3,487,000	4,891,000
July	91,000	275,000	366,000
August	100,000	755,000	855,000
September	86,000	622,000	708,000
October	17,000	221,000	238,000
November	122,000	242,000	364,000
December	192,000	412,000	604,000
	2,012,000	6,014,000	8,026,000

"The export of treasure from Southampton a few years ago represented by far the larger part of the exports of gold and silver from Europe to the East. During the last four or five years, however, the largest share of the exports took place from Marseilles, and from Gibraltar, Malta, and Suez. The following are the figures for 1863-64:—

Conveyance.	1864. £	1863. £
Peninsula and Oriental steamers from Marseilles	7,777,000	5,788,000
Imperial Messagéries from Marseilles	7,770,000	3,837,000
Peninsula and Oriental steamers from Gibraltar, &c.	553,000	443,000
	16,100,000	10,068,000
Peninsula and Oriental steamers from Southampton	8,217,000	11,386,000
	24,317,000	21,454,000

"The months of greatest export were January and February, March and April, and August and September. Whenever the rates of discount were rendered sufficiently stringent, as, for example, in May, and in October and November, there was an immediate diminution of the drain.

"There were *fifteen* alterations of the minimum rate of discount at the Bank of England between 21st January and 15th December

(1864). In subsequent parts of this paper full details will be found of the condition of the Bank at the dates of these changes. The year began with a minimum rate of 7 per cent. adopted on the 24th December, 1863. In May the rate was altered four times, and varied from 7 per cent. to 9 per cent.

"There were eleven changes in the rate of discount at the Bank of France (see details at p. 33)* between the 24th March and 22nd December (1864). The extreme rate was 8 per cent. maintained for ten days in May and for three weeks in October.

"It is only necessary to refer in a few words to the total disuetude of the former phraseology which spoke of the increase and diminution of the quantity of bank notes in the hands of the public—that is of the circulation—as the cause of greatest potency in the money market and the markets for commodities. Experience has established beyond all dispute that in this country the moving forces are capital and credit acting through the rate of interest.

"The doctrine that a large central reserve of bullion is the only means by which commercial crises can be prevented from assuming their most distressing forms has many advocates among the leading economists of other countries, and the party holding these views has quite recently found an expositor, as impartial and able as he is accomplished and acute, in M. Emile de Laveleye, who, in two articles entitled 'Les Crises Commerciales,' in the 'Revue des Deux Mondes' of the 1st and 15th January (1865), has left but little to be added by any writer who may follow him.

"After stating at length and with remarkable clearness the actual experience of this country and France in 1864, M. Laveleye says: 'According to this exact analysis of carefully ascertained facts, it is easy to be convinced that commercial crises are the results of a derangement in the balance of the external commerce of a country acting on a market where credit is most largely employed and where metallic money is economised to the utmost. *All countries which carry on gigantic transactions with small reserves of gold and silver, and which have a vast movement of importations and exportations must be exposed to these economical perturbations.* This is why England first, and then America, have most severely suffered from these visitations. France has suffered much less, because up to the present time it has employed credit in but a limited degree, and has possessed a vast metallic circulation; but during recent years France has begun to encounter the perils and vicissitudes of the money market, because its credit circulation and its external commerce have very nearly doubled. The countries of the centre of Europe have almost entirely escaped, because in them the external commerce is by comparison unimportant and the employment of credit almost *nil.* Hamburg, although having discontinued the use of bank notes, has experienced terrible disasters, because its external trade is enormous and almost all its operations are conducted on credit. The more a country expels the precious metals from the channels of circulation and replaces them by instruments of credit, bank notes, cheques, warrants, deposits, clearing-houses, &c., and the more at the same

* The references here and subsequently relate to tables and quotations in the remainder of the paper which will be found in the *Economist.*

time it develops its relations with foreign countries, the more it will be exposed to the periodical return of financial perturbations, because more easily an unfavourable balance of trade and payments will disturb all the mechanism of exchanges, and will require from the managers of credit institutions redoubled circumspection, prudence, and ability.'

"It happens, fortunately, that the remarks made by M. Laveleye in this passage to the effect that the countries of the centre of Europe have hitherto escaped in great measure violent perturbations of the rate of interest, admits of being brought to the test of a wide range of facts. M. Maurice Aubry, in his recent work 'Les Banques d'Emission et d'Escompte,' has ascertained with great care the average annual rate of discount for first-class paper in the nine principal money markets of Europe during each of the ten years 1855-64; and from the elaborate diagrams and tables given by him, the following summary has been constructed:—

III.—*Average Annual Rates* (*per Cent. per Annum*) *of Discount in the Nine Principal Markets of Europe during each of the Ten Years*, 1855-64, *as given by M. Maurice Aubry in his work "Les Banques d'Emission et d'Escompte"* (*Paris*, 1864).

Years.	London.	Paris.	Frankfort.	Hamburg.	Amsterdam.	Berlin.	Leipzig.	Italy.	Vienna.
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
1864	6·98	6·44	3·60	4·38	4·85	4·74	5·05	7·70	7·60
'63 ...	4·24	4·63	3·35	3·33	3·62	4·08	4·35	5·66	5·83
'62	3·80	3·56	3·06	3·13	3·73	4·00	4·00	5·06	5·72
1861	5·26	5·54	3·20	2·44	3·07	4·00	4·00	6·31	6·00
'60	4·17	3·63	2·49	1·98	3·00	4·00	4·00	4·57	5·00
'59	2·73	3·46	3·47	2·15	3·00	4·20	4·80	4·50	5·00
'58	3·23	3·70	3·56	1·91	3·75	4·30	4·62	5·29	5·00
1857	6·55	6·13	4·67	6·30	4·94	5·76	6·35	6·74	5·21
'56	6·08	5·55	4·29	5·22	4·28	4·94	5·05	6·00	6·00
'55	4·88	4·43	3·44	3·25	3·20	4·08	4·91	6·00	6·00
Average	4·42	4·54	3·50	3·41	3·63	4·37	4·70	5·57	5·53

"We see in this table the great steadiness of the rate of discount at Frankfort, Berlin, and Leipzig, and also at Amsterdam, as compared with London and Paris.

"To recur to the influence exercised by the Bank of England in 1864.—It has been very obvious to careful observers that the action of the Bank rates, especially at the more critical periods, was immensely aided by the operation of the rule adopted by the directors in 1858 to the effect that the Bank would not (except at the usual quarterly periods in anticipation of the dividends) make advances to bill brokers. The effect of that rule in 1864 was to compel the discount houses to provide amply for their own engagements independently of the Bank of England, and to leave the Bank with the disposal of its own resources for the accommodation

of the merchants resorting to it direct. In other words the alteration of the bank rate told immediately on every part of the money market, and upon no class more powerfully than upon the discount establishments. Another alteration also introduced about 1858 into the practice of Lombard Street operated beneficially last year. Prior to 1858 it was the custom, not only among the London, but also among the country bankers, to deposit large amounts with the bill brokers at 'call,'—that is, repayable strictly at any time, but virtually assumed by the borrowers to be held somewhat indefinitely. For the last few years this practice has, in many important instances, been so modified, that the loans are made repayable at specified dates, the dates of course being more or less distant, as may suit the convenience of the parties. The effect of the change, however, has been to remove or greatly reduce an element of uncertainty, and a cause, therefore, of miscalculation.

"The formation—or rather the projection of new companies has proceeded in 1864 on even a larger scale than in 1863. Details are given at a subsequent page (see p. 36) from which it appears that 282 new companies asking for 106 millions of capital and 12½ millions of deposits were advertised in 1864; against 263 companies asking for 78 millions of capital and 9 millions of deposits in 1863. Besides these 282 new companies there were in 1864 extensions, &c., of old companies involving 35 millions of further capital, and calling for 12 millions in deposits and premiums. So that between the new and old projects of 1864 the public were invited to subscribe 141 millions of capital and pay 24 millions in hard cash as deposits and premiums. In the two years, 1863 and 1864, it seems to be true that the British public have had brought before them joint stock schemes implying the acceptance of future engagements to the amount of at least 200 millions, and present payments for deposits and premiums of about 41 millions sterling. The activity of 1863 and 1864 in this description of enterprise has been equal to twice the figures which represent the same results for the whole of the seven years, 1856-62, during which the limited liability law was in force more or less perfectly. It is, of course, not contended or believed that in two years 200 millions of engagements have been *bonâ fide* contracted to new companies and new extensions of old companies; nor that 41 millions of actual capital has been paid over to the projectors of these schemes in order to set them in motion. It is quite true, however, that to the extent of some large fraction of these figures the English public have embarked in the last two years in joint stock enterprises; and it does not admit of a doubt that many of the phenomena presented by the money market in 1864, and at the present time, can be explained only by investigating the effects produced by this prodigious and sudden development of a new kind of investment.

"The conclusive historical guide, in such an investigation, would be the experience of this country during the great period of railway construction in 1846-50—that is, the five years which followed the excited season of 1844-45. During those five years the resources and savings of the mercantile and middle classes were taxed to the utmost to provide the capital required for completing the lines of

railway projected in the sanguine days of the mania when people thought much of present premiums, and little of the steady pertinacity with which one call could follow one another as the earthworks and buildings proceeded. The effect was that scarcely anybody had a spare sixpence for anything. A man whose means might have prudently afforded 1,000*l.* for railway calls spread over five years had bound himself to find 10,000*l.*,—and was consequently driven to starve his business and himself, to sell whatever was saleable at the earliest moment, and at any price—to live from hand to mouth—to borrow of every one and lend to none. No wonder that during these dismal five years markets of all sorts were depressed almost beyond former experience, and that enterprise of all kinds, except railway making, was at a standstill. Now for the qualifications of the comparison as between the 1846-50 and the present time—and these are vital. The continued and almost unrelieved nature of the pressure of 1846-50 arose from the circumstance that railway works once fairly begun must be finished, under the penalty of sacrificing nearly all the previous expenditure. A piece of railway embankment or railway viaduct standing by itself was as useless and unmarketable as the great pyramid. The line must be finished from end to end before it could possibly earn any revenue. The shareholders once in the hands of the engineer and contractor could not withdraw, could not stand still, but must go on. The schemes of the last two years are only to a small extent railways. They are banks, finance and trading companies, hotels, steamship lines, mines, foreign land and investment companies, and the like—schemes for the most part, in which if the shareholders so please, they can stop the whole concern at a week's notice—call in the auctioneer—sell any assets that may be left—take whatever minute dividend the sale may bring—and after indulging in the usual vehement and disorderly meeting which celebrates the break up of a company—retire with the solemn resolution never to lose another farthing at all events in *that* particular sort of venture.

"Bearing in mind that happily we are not bound down as were the railway subscribers of twenty years ago, still the financial effects of the excesssive joint stock speculation of 1863-64 are precisely the same in kind as those of the excessive railway speculation of 1844-45. At the present time there are thousands of cases of persons in and out of trade who have committed themselves to joint stock engagements greatly beyond their means. Where these errors have been fallen into by merchants, manufacturers, and people in business, the consequences are either a sacrifice of the surplus shares at any price, or a contraction of the ordinary scale of their operations. Hence arises the state of things we have seen for some months past. The public have lost all appetite for new schemes, or rather the surplus capital in the hands of the public waiting to be employed in new schemes has been all absorbed. The markets for most kinds of shares, especially the more recent descriptions, are weak and depressed, because borne down by continuous sales; and failures are frequent, in which it appears, on investigation, that the chief cause of embarrassment has been losses on joint stock speculations.

"The public have now had the benefit of a year's experience of

the finance companies and banks started in such profusion in 1863, and they are beginning to discover that the warnings given by prudent people were not unheeded. One or two of the finance companies have apparently established themselves on a sound foundation —that is to say, they have found out a class of customers who want the sort of assistance the companies can give, who can afford to pay for it at high rates, and, what is still more important, can replace the principal at something near the stipulated date. Prior to the monetary pressure in the autumn, a good deal of attention was directed to what were called 'finance bills,' then to be met with rather abundantly in the London market. These bills came into existence in the following way:—Contractor A came to Company B, and applied for, say 50,000*l.* for twelve months on the security of debentures issued by a railway company in process of construction, but expected to be finished and open within nine or ten months. B said in reply, 'Yes; we will lend you the 50,000*l.*, not in cash, but in your own acceptances to your order at six months. These acceptances you can take into the market and discount, and in that way procure the ready money you require.' In other words, the lender B not having 50,000*l.* in cash waiting to be employed, but expecting to have it at the end of six months by the collection of some of its loans or the sale of some of its assets, desired in the meantime to make a profit by the use of its name and credit. Naturally enough the authorities of the money market refused to encourage this system of lending. A sound bill of exchange is a bill drawn against merchandise sold and delivered, and on its way to the actual consumer, and the price paid by the consumer will provide for the payment of the bill at its maturity. Here the basis of the document is clear and specific. But a 'finance' bill such as we have described has no such foundation. It is neither more nor less than a speculation on the state of the money market for six months to come, and upon the degree in which two or three parties, all trading on acceptances and credit, may be able to fit their engagements one into the other. The finance bills, therefore, met with so much discouragement, that for a time they have disappeared,—but only for a time. They will revive by and by, and produce mischief.

"The only solid resources of the finance companies are their capital, subscribed and paid up, their deposits, and their reserve fund. The deposits they do or should hold at long notice. If they can obtain a large command of capital in that form, and at moderate rates of interest, and avoid investments at too long dates, they will succeed. But the fabulous dividends of 25 and 30 per cent. must not be expected. The opportunities for making huge lumps of money as commission, &c., occur but seldom. The negociation of foreign loans is as often a failure as a success; the hostile influences are so many, and the competitors, home and foreign, so keen;—and sooner or later the finance companies who understand their business will become, as is inevitable, a species of institution between a bank and an insurance office.

"The new banks have, on the whole, not done so well as the finance companies. The banks exclusively or most largely dealing in exchange and credits have done the worst. Several of them have

formed combinations, and some have disappeared entirely. Still the effect of the banking enterprise of the last two or three years has been to establish several new and prosperous institutions, and not before they were needed by the growing trade of the country. There has been in 1864 further progress in the fusion of the smaller private bankers in London, either with leading joint stock, or with larger private banks. It is probable that the process will go forward until the number of private banks in London is reduced to under a dozen strong and powerful firms; and assuming these firms to be vigorously managed, they will be able to preserve and attract quite as much business as they can get through.

"The stoppage of the Leeds Banking Company on the 17th September, 1864, was the most notable failure of the year. The bank itself was of thirty years' standing, had had a large and profitable business, and until within a year or so of the catastrophe had been prudently managed. All sound maxims of business seem to have been then laid aside. It is said that the principal officer found means of allying himself, without the knowledge of the board, with a small knot of reckless men who, aided by the resources and credit of the bank, launched into the most improvident speculations. A short time sufficed to involve the bank past redemption. For a few weeks before suspension, money was raised in the London and other markets by re-discounting local bills and especially the bills of the reckless customers. But this was a process which soon excited suspicion and tended to hasten the final break down. The causes of the failure, stated generally, were precisely the same as in the notorious instance of the Western Bank of Scotland in 1857—that is to say, excessive advances made to a few desperate and penniless gamblers.

"In appendix (54) a list is given of the principal failures in 1864. The names in the last four months of the year are very numerous. In the cotton districts the number of failures of manufacturers and spinners in September, October, and November, was about 120, with liabilities of more than a million sterling. In London and Liverpool the proximate cause of failure was in a large class of cases the severe fall in the markets for produce, especially cotton, sugar, jute, rice, and fruit. The almost complete derangement of credit in Spain reacted extensively on English houses connected with that country; and the violent fluctuations of exchange at New York, coupled with the vicissitudes of all trading operations in the States and Canada in sympathy with the varying probabilities of peace, produced great loss and uncertainty.

"The variations in the cotton market in 1864 are in themselves a history, and in the elaborate circular quoted hereafter (p. 20 to 26) a very full account of them will be found. There was first a gradual decline from January to April;—then a steady advance to the end of July;—then a rapid fall to the middle of October;—and lastly a marked recovery to the end of December. From July to about the close of October the average fall on long staple cottons was about 30 per cent.; in Smyrna sorts 47 per cent.; in Dhollera and China, 43 per cent.; and in Bengal, 50 per cent. These extreme rates of depreciation as compared with the highest prices of July

were recovered to the extent of nearly one-half before the end of the year. The fall in the prices of cotton yarns and piece goods during the panic in October was as great as in the case of the raw material. In cloth and yarns the fall was rather over 30 per cent. as compared with July.

"The circular referred to computes as follows the value of the raw cotton imported, the exported, and consumed, in the United Kingdom during the six years 1859-64:—

Years.	Imported.	Re-exported.	Consumed.	Average Price per Pound.
	Mln. £	Mln. £	Mln. £	*d.*
1864	84,0	22,0	52,8	$22\frac{1}{2}$
'63	59,0	18,6	44,4	$20\frac{1}{2}$
'62	31,6	12,0	27,1	$14\frac{1}{4}$
'61	38,7	7,5	31,4	$7\frac{5}{8}$
'60	34,4	5,1	25,9	$5\frac{3}{4}$
'59	31,0	3,7	25,4	$6\frac{1}{4}$

"It must be borne in mind that these import values are founded on the price of the article at the port of entry, and include therefore the freight, charges, and importers' profit. In 1864, for example, we did not really pay to India, Egypt, and other cotton-producing countries 84 millions sterling for raw cotton. How much we really did pay them cannot be ascertained with any degree of precision from published tables. We may approximate, however, towards it by the employment of another method; and arrive by that method at conclusions which will illustrate some other parts of the case of an interest and importance of their own.

"The following table gives in outline the imports and exports of merchandise and gold and silver to India and the Levant (including Egypt) for the four years 1861-64:—

Years.	Imports.		Exports.		Total.		
	India.	Levant.	India.	Levant.	Imports. Merchandise.	Exports. Merchandise	Exports. Gold and Silver.
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
1861	26	13	17	6	39	23	10
'62	39	17	17	7	56	24	18
'63	53	22	22	11	75	33	23
'64	60	26	22	14	86	36	23

"We see from these figures that in 1863 and 1864 an export of 23 millions of treasure sufficed to settle a balance which, on the face of the return, showed an excess of 29 millions in 1863, and 27 millions in 1864, after all exports of goods and treasure were enumerated—that is to say, in 1863 we are put down as having imported 75 millions, and sent away in goods and treasure 56, leaving as we

have just said, an apparent debt of 29 millions unliquidated for that year, and 27 millions unliquidated for 1864. We know, however, from the state of the exchanges, that there is no such large unliquidated demand against this country pressing on the eastern markets. The explanation consists in the simple circumstance that the value at the foreign port of shipment of the goods sent to this country and put down in our own Customs returns as 86 millions in 1864 was some sum very considerably smaller—so much smaller, indeed, that we are able to balance the account by sending 59 millions sterling of merchandize and treasure combined.

"But there is this futher point. In four years the imports from India and the Levant have certainly doubled in value. These are countries of exceedingly backward civilization. Hitherto, the native cultivators have had few wants, and have been so ignorant of the real principles of trade as to regard gold and silver as precious beyond all other things and as fit only to be buried in secret hoards instead of being sent away as rapidly as possible in exchange for articles of use and enjoyment. A trade, therefore, of imports from these countries suddenly doubled in volume, necessarily implied the transmission of a large part of the price in specie and bullion; and so it actually happened. The average annual export of treasure to India and the Levant for the last five years, 1857-61, was 13½ millions sterling; the average export of 1863-64 was 23 millions. The meaning of these figures is this, that so potent is a free and vigorous commerce to arrive rapidly at a state of things in which trade, even with very backward countries, becomes the barter of one set of commodities for another set of nearly equal exchangeable value, that in the course of two years we have made great progress towards overcoming the tendency of the sudden import of cotton from the East to carry away excessive quantities of gold and silver.

"The probability seems to be that in 1865 the action of the Eastern demand for bullion remittances will be on a much more limited scale than in 1863-64; and that the taste already excited in those countries for articles of English production will have laid the solid foundations of a commerce as regular as that with America or France.

"We may learn from this extreme case the immense value to the growing commerce of the country of a central cash reserve of sufficient magnitude to bear the loss of a few millions without damaging our system of credit, and raising the rate of interest suddenly and to a high point. We repeat that no precautions can be devised which will under all circumstances prevent financial pressure, or even financial panic—still less which will prevent variations in the rate of interest. But nothing can be plainer than the most direct means for increasing both panic and pressure is for a country carrying on a vast foreign trade to cripple its central bank in the acquirement and command of an adequate cash reserve.

"We have seen that the average annual export of treasure to the East in the two years 1863-64 was 23 millions sterling, against an average of 13½ millions for the five years of 1857-61. But apart from the supplies of gold furnished by the new sources in California and Australia, opened fifteen years ago, it is hard to understand in what

way the transference of the cotton trade from the Western to the Eastern hemisphere could have been accomplished without producing a commercial convulsion beyond all modern experience. The consignments of gold from Melbourne and San Francisco have constantly come to hand at the most critical junctures, and have enabled us to meet the Eastern demand with a readiness and facility beyond the capacity of any other means of relief.

"In appendix (47) ample evidence will be found of the production of gold and silver in the countries of old and new supply during the fifteen years 1849-63. Of that evidence the following table is a summary:—

Annual Average. Total Production of Gold and Silver, in Periods of Years, 1849-63. *Summary of Table* (48) *in Appendix.*

Periods of Years.	Gold.		Total.	Silver.
	Old Sources.	New Sources.		All Sources.
	Mln. £	Mln. £	Mln. £	Mln. £
1849-51 (3)	13,5	10,3	23,9	15,5
'52-56 (5)	14,0	24,7	38,7	16,1
'57-59 (3)	14,6	21,9	36,5	17,1
'60-63 (3)	15,3	18,3	33,5	18,2

Note.—The total production shown by these figures in the fifteen years, 1849-63, is of *gold* from *old* sources 215 millions; from *new* sources, 297 millions; *silver* from *all* sources, 248 millions.

"It is plain from these figures that for the last seven years the *new* sources of supply have yielded year by year a diminishing quantity of *gold!* and that the old sources of supply have done little more than maintain the former rate of production. As regards *silver*, the increase throughout the fifteen years has been, if not very great, still so continuous as to represent at present a production 20 per cent. larger than in 1849-51. But in the case of *gold* the present annual production from all sources is 13 per cent. less than in the five years 1852-56.

"We should, however, very imperfectly apprehend the problem to be considered if we did not ascertain as far we can the growth in the number and magnitude of the transactions to be accomplished ultimately in some form employing the command of gold and silver coin; as well as the annual supplies available for purposes of commerce. As concerns the United Kingdom, we can readily enough learn the progress of our external trade, and for our present object it will not be necessary to go further than the evidence of such progress, as given in the following abstract of imports and exports:—

Real Value of Exports and Imports from, and to, United Kingdom.

[00,000's at unit end omitted—thus 160,4*l*. = 160,400,000*l*.]

Years.	British and Irish Produce.	Foreign and Colonial Produce.	Total Exports.	Total Imports.
	Mln. £	Mln. £	Mln. £	Mln. £
1849	63,6	not given	not given	not given
'50	71,4	—	—	—
'51	74,5	—	—	—
'52	78,0	—	—	—
'53	98,9	—	—	—
'54	97,2	18,6	115,8	152,4
1855	95,7	21,0	116,7	143,5
'56	115,8	23,4	139,2	172,5
'57	122,1	24,1	146,2	187,8
'58	116,6	23,2	139,8	164,6
'59	130,4	25,3	155,7	179,2
1860	135,9	28,6	164,5	210,5
'61	125,1	34,5	159,6	217,5
'62	124,0	42,2	166,2	225,7
'63	146,5	49,5	196,0	249,0
'64	160,4	not given	—	—

"We find here an external trade doubled in the last twelve years, and this external trade is, we believe, but a faint representation of the increase of transactions throughout the whole of our domestic industry, But not only has this multiplying process been carried on in these islands:—it has prevailed almost as largely in France,—and the activity that has prevailed in France, and already profoundly modified French society and in institutions, has spread all over Germany. It has filled Italy—aroused Spain from its long lethargy—and penetrated even to the remote provinces of Russia. No corner of Europe has remained insensible to the new stir of industry and enterprise. In Turkey, Asia Minor, Egypt, and other countries of the Eastern Mediterranean, the creation of new employments, the appetite for pursuing new avenues to wealth, has become one of the most remarkable circumstances of our time. Before the American war gave to India the largest share of the cotton supply of the world, railways, better modes of government, and the influence of English example and the resources of English capital, had carried India far on the way to be one of the largest trading countries now known. The immense wealth poured into Bombay and Bengal during the last two years has apparently at last broken down most of the barriers to the reception by the natives of thoroughly European notions of commerce. Evidence is collected at a subsequent page (p. 32) of the effects produced by the influx of silver into Western India in 1863-64. All these facts are indicative of the enormous addition which has been made during the last fifteen years to the extent and depth of the channels of circulation required to be filled with metallic money in some form or other; and they are also facts which enable us to understand how it is that the addition

of say 300 millions of gold from new sources during those fifteen years, has produced so small an influence on prices. Last year we discussed some of the causes which, as we believe, explain without any reference to the increased supplies of gold many of the more important variations in prices since 1849, and further observation and reflection has confirmed us in the conclusions then stated.

"We now confine ourselves to a more limited part of the case by presenting in the following table a comparative outline of the prices of certain leading articles in London on 1st June, 1865, as compared with the prices prevailing at four earlier periods.

Wholesale Prices in London. Comparison of 1st January, 1865, with Five Former Periods, stating in Percentages the degree in which the Prices of 1st January, 1865, were Higher or Lower than the Prices of the Five Selected Dates.

1	2	3	4	5	6	7	8	9	10	11
Articles.	Higher	Lower	Higher	Lower	Higher	Lower	Higher	Lower	Higher	Lower
	Than 1st July, 1864.		Than 1st January, 1864.		Than 1st January, 1861.		Than 1st July, 1857.		Than Average 1845-50.	
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
Coffee	4	—	6	—	23	—	7	—	61	—
Sugar	—	28	—	23	—	16	—	46	—	35
Tea	—	1	—	14	—	30	—	33	8	—
Wheat	—	6	—	4	—	28	—	40	—	28
Buckwheat	3	—	6	—	—	—	17	—	23	—
Indigo	18	—	11	—	11	—	12	—	37	—
Oils	—	4	—	—	—	6	—	8	29	—
Timber	—	7	—	5	—	4	—	6	—	3
Tallow	—	—	—	—	—	31	—	37	—	7
Leather	—	—	—	2	—	—	—	12	31	—
Copper	—	5	—	17	—	14	—	24	—	1
Iron	—	10	—	10	4	—	—	22	—	5
Lead	—	6	—	4	—	6	—	20	15	—
Tin	—	10	—	13	—	28	—	30	15	—
Total Note circulation in Great Britain	—	5	—	5	—	6	—	4	—	3

Note.—This table (deduced from the percentages in p. 54) may be read thus:—Columns 2 and 3 give the differences per cent. higher or lower of the prices on 1st January, 1865, as compared with 1st July, 1864. For example, coffee was 4 per cent. higher; sugar 28 per cent. lower; wheat 6 per cent. lower; and so on, on 1st January, 1865, than on 1st July, 1864.

The articles *raw cotton*, *silk*, *flax*, *hemp*, *wool*, and *tobacco* are omitted for the obvious reason that the derangements of supply consequent on the American war have rendered the prices wholly exceptional.

"We read in column 9 of this table the immense fall which has taken place in prices since July, 1857, and in column 7 the marked

fall which has taken place since 1st January, 1861. We find in column 3 very plain traces of the depression which occurred in the six months preceding 1st January, 1865, and led, as we know too well, to many of the commercial shipwrecks of last October.

"It is quite true that in columns 10 and 11 we have forcible evidence that the average prices of the six years 1845-50 were in several important instances much lower than at the present time. But this is a result subject to large qualifications. In the course of the present review (p. 3) we have shown that 1845-50 was a period of small demand and great stagnation in consequence of the pressure of the railway calls. Besides, the operation of that powerful cause, the six years in question included the Irish famine, the commercial panic of 1847, the French Revolution of February, 1848, and the year of war which followed it all over Europe. Hence, the prices of 1845-50, when reduced to an average, present necessarily a low datum line, and convey, therefore, a false impression of the changes of subsequent years.

"The truth is, that with the present extended and growing commerce of the world, far more mischief and inconvenience will arise from the effect of what seems to be a continuous gradual decline in the new supplies of gold than from any effects which have flowed or may flow from the Californian and Australian discoveries. One of the chief purposes of civilization is to assuage human ills by rendering the means of comfort and enjoyment cheap. All science and all enterprise is directed towards cheapness Political economy has extirpated the belief in all forms of dearness and scarcity as good even for producers. We now understand, and a large part of the world likewise understands, that for a commerce to rest upon the most solid and profitable foundations, it must deal on the largest scale in commodities which command the widest consumption, for the intrinsic reasons that they are cheap and good. There is no limit to the capacity of consumption at some price sufficiently within reach of the great mass of mankind. Pine apples, Tokay wine, Persian silks, Cashmere shawls, strings of pearls, and chairs of ebony, would meet with a demand as large and constant as tobacco and sugar if they could be procured at some price easily within the compass of those who live by the commoner kinds of labour. It is a main end of science and skill which a wholesome civilization fosters, to find out incessantly new methods of expanding luxuries into enjoyments, enjoyments into comforts, and comforts into necessaries of life, and it is the business of commerce, casting aside all prejudices and trammels, to give to every part of the earth the opportunity of sharing in these benefits with the least delay, and on the most advantageous terms."

II.—*Employment of Cotton Operatives upon Public Works.*

A REPORT by Mr. Robert Rawlinson, the Government Engineer, dated the 25th January, 1865, upon the progress made in the public

works undertaken to give useful employment to the distressed operatives of the cotton manufacturing districts of Lancashire and the neighbouring counties, has been recently laid before Parliament. From Mr. Rawlinson's compendious statement and its elaborate appendix, the following facts have been selected :—

By the Public Works (Manufacturing Districts) Acts the unions embarrassed by the cotton famine were enabled to obtain advances from the Exchequer Loan Commissioners to the extent of 1,850,000*l.*, chargeable with interest at the rate of 3½ per cent. The whole of this sum, with the exception of a small balance of 3,918*l.*, has been appropriated.

The purposes to which the money is to be applied are shown in the following summary :—

		£
1.	For road and street improvements	839,000
2.	„ water supply	414,629
3.	„ sewerage works	370,946
4.	„ erection or extension of market places	59,139
5.	„ public parks and recreation grounds	58,285
6.	„ cleansing, embanking, and pitching rivers	13,038
7.	„ cemeteries	52,550
8.	„ land drainage and other agricultural works	12,453
9.	„ gas works	10,832
10.	„ street bridges	10,203
11.	„ public baths	5,000

Some notion of the magnitude of the works undertaken, and now in course of execution, will be given by the subjoined statement :—

Sewerage Works—		Yards.	Yards.
Length of pipes—			
9 inches to 12 inches diameter		169,784	
12 „ 20 „		148,467	
20 „ and upwards		21,615	
			339,866
Length of brick sewers—			
Under 2 feet 6 inches		125,206	
2 feet 6 inches and upwards		69,374	
			194,580
Street Works—		Square Yards.	Square Yards.
Paving		2,349,259	
Flagging		1,181,569	
			3,530,828
		Yards.	Yards.
Channelling		494,522	
Kerbstone		570,872	
			1,065,394
Total length of streets		—	349,282
Road Works—			
Total length of works		—	136,279
Water Supply—			Tuns (252 galls. each).
Reservoirs for the storage of waterworks		—	5,876,000

The money is advanced by instalments to the various localities concerned as the works proceed; no subsequent instalment is granted until the Government Engineer is satisfied as to the proper expenditure of the previous one. At the date of Mr. Rawlinson's Report the instalment account stood thus:—

	£
Amount ordered for places as a *first* instalment.....	517,832
,, ,, *second* ,, ...	252,607
,, ,, *third* ,, ...	30,363
	805,820

This sum leaves a balance of 1,040,280*l.* to be advanced.

In the week ended the 31st December, 1864, there were 6,719 men employed upon the works, of whom 2,741 were "skilled" labourers and 3,978 "factory operatives."

The wages of the factory hands were at the undermentioned rates, viz.:—

		s.	d.		s.	d.
833	earned weekly.....	4	–	and under	10	–
2,141	,, ...	10	–	,,	15	–
954	,, ...	15	–	,,	25	–

The sanitary and the moral effects of the public works upon the distressed operatives is described by Mr. Rawlinson in these terms:—

"The public works in Lancashire have served to prove that willing and intelligent men can soon learn a new occupation, when stern necessity forces them to it, and a fair opportunity is afforded them. It was said previous to this great trial that cotton factory workers were entirely unfitted for any other sort of labour than that of attending to machines, in heated factories, or of working at the loom. *It was also asserted, that using the pick and the spade would ruin their hands and fingers, by destroying that delicacy of touch required in manipulating cotton thread. Experience, however, teaches the contrary, and further shows that, in a month or six weeks, the cotton worker's hands harden to rough out-of-door work, and breathing fresh air, under the excitement of a new exercise, helps to set the muscles, and speedily to strengthen both the appetite and the man's bodily frame.* It must, however, be remembered, that this is not true of all factory workers, but only a portion of them, and these the best, morally and physically. The public works executed in Lancashire have been in a great degree undertaken by volunteers from amongst the distressed factory operatives. That is, by men willing and wishful to escape from dependence on either the dole of charity or the taint of pauperism. The work has not been "test work," and yet it has proved the most effective form of test. Willing men have accepted the work so soon as it has been offered to them, and they have striven to the uttermost of their ability to earn an honest and independent living at it. Unwilling men have moved away to some other district, or have managed to do without this form of labour, and thus the Local Relief Committees and the Poor Law Guardians were, for the most part, as effectually relieved from their presence as if they had remained at work. It will be, however, a great mistake to look on this Lancashire experiment as proving that large numbers of men may suddenly be turned from one occupation to another wholesale. This has not been accomplished in Lancashire, nor will it ever be practicable. Out of thousands of men involuntarily idle, hundreds only have had profitable work found them. This has indeed been brought as a charge

of failure against the Public Works Act. The notion seems to have been prevalent that all the distressed men, as enumerated and published in the weekly returns, could and would be set to work at once, on the passing of the Act; and when this was seen not to be the case, a charge of "failure" has been made. The experiment of attempting to provide labour wholesale for large numbers (whole masses of men) was tried in Ireland during the years of famine, and utterly failed. If any similar attempt had been made in Lancashire, the failure must have been as palpable. If Government Engineers had been sent down to set out works on which to find employment for all the distressed men, the best and the worse alike, there could have been no choice, no independence, no emulation, so that tht incapable, the unwilling, and idle would have leavened the entire mass. Fortunately for this Lancashire experiment, the works have been divided and subdivided, so that men in small gangs could be employed, and there duly mixed with skilled workmen and entirely directed by local superintendence."

In the early days of the famine it was alleged, with all the temerity of ignorance, that the cotton operatives were incapable of sustaining out-door labour. There is a passage in the quotation above where Mr. Rawlinson emphatically vindicates the mill hands from this assumed incapacity. That part of the extract has from its importance been re-printed in *italics*.—Ed. *S. J.*

III.—*The Government Assurance and Annuity Tables.*

From the *Economist*, of the 4th March:—

"Mr. Gladstone has just presented to Parliament his tables for selling small deferred annuities or assurances to the poor. They are worth a little study. The day will certainly come—may possibly come while Mr. Gladstone is alive—when the greatest of undeveloped economic forces, the principle of insurance, backed by the State guarantee—*i.e.*, of insurance which really insures—may be applied upon a somewhat extensive scale. There are thinkers, we know, who believe—we are not sure that Mr. Gladstone does not believe—that the great campaign against pauperism, which it will be the work of the next generation to wage, can best be fought out with this weapon; that it is stronger and more applicable than any yet formed, than, for instance, peasant proprietorship; that it offers the link which is to bind together the two necessities of civilization, the unlimited right of individuals to accumulate, and the claim of the masses to a high degree of physical comfort and ease. Those thinkers may be in the wrong, probably are; for, after all, the world is governed by moral laws as powerful, though not as definable, as economic principles, but they have one considerable fact in their favour, assurance can do a good deal more than it does do. It is conceivable, though it may not be probable, that a system of assurance could be so worked as to supersede all existing forms of taxation, and combine the direct taxation for which theorists sigh with the indirect taxation practical men accept as indispensable *and* the voluntary taxation of which dreamers have dreamed dreams. It is conceivable, and very much more possible, that assurance may be so used as to meet almost all those contingencies which we call casualties, and which so very greatly baffle men's efforts to regulate their affairs by an unchangeable law. The success of a company which insures against accidents gives light on that point, for if accident can be compensated, why not sickness—the benefit clubs do that—or loss of tools—there are societies trying that—or defects of character—the Guarantee Society thinks of that—or even sudden absorptions of capital—against which, in one department of life, Lloyds

succeed in providing? It is, in short, conceivable—and we only say conceivable, for thinkers have never yet had to deal with the datum of a race *all* of whom were of full developed intelligence—that insurance might be made to realise that assistance given by the whole to the individual, and by the individual to the whole, that brotherhood in action, though not in sentiment, of which the only *original* French economists, the dreamy persons called Socialists, St. Simonians, Fourierists, Icarians, and what not, have dreamed somewhat silly but still wide and novel dreams. Mr. Gladstone has applied the principle in a limited, it may seem a small way, but yet in one which covers a very extensive area.

"We are not quite sure that the extent to which his plan may be developed is yet quite appreciated. It is a real blow at pauperism. The fundamental idea of his scheme for small annuities is that, if perfect, or nearly perfect, security can be obtained for the savings of thrift, *and* if the poor can be induced to mortgage the period of full work against the period of forced idleness, much of the misery of proletaire life — of trade based upon no capital but the muscles — may be prevented. The state can grant the first datum, a security which is nearly perfect, and which is not limited in time, though it cannot grant the second, the willingness to postpone the present to the future. To grant the first, however, efficiently and permanently, it must grant it without injuring its own resources, and Mr. Gladstone has therefore had tables prepared, showing to all men what they can secure by economy, without asking anything from anybody except the certainty of implicit faith. He may, indeed, in his anxiety for permanence, have overdone the thing a little. The Treasury, we perceive, in selling low assurances and small annuities —in bringing science that is to bear upon the savings of the masses—has guarded itself at least sufficiently well. The first rule laid down by Sir A. Spearman was that interest should be calculated at three per cent., which, as consols are not likely to rise soon above ninety, is a profitable rate to Government. Then the table taken for basis is the Registrar-General's life return of the whole population, which includes the well-off classes, and is, therefore, as far as regards deferred annuities, a very safe table to calculate from, while, as regards life insurance, the dangerous trades and all visibly bad lives are summarily struck out. Then 10 per cent. has been added to all premiums for the cost of collection, and, whenever they are paid oftener than once a-year, 20 per cent., which, as the State is not supposed to be seeking profit, is, to say the least, a decidedly prudent form of calculation. The error, if there be one, however, is on the right side, and we may examine with safe consciences the results which, under these strict limitations, may be secured by thrift. We say with safe consciences, because it is quite clear that the advantages purchasable under these tables are the least to be secured for the money; that the taxpayers are not giving anything; that the Annuity Bill so far as it may hereafter take the place of the Poor Law, has at least the advantage of being entirely self-supporting.

"There are a good many tables in the book laid before Parliament, but all of them are reducible to two. The assurance tables enable a man to provide for his family by securing a sum at death (*not* an income—that improvement would have been a complication), and the deferred annuities to guard himself against old age. The former will not be the most popular now, though the better class of artisans begin to be very anxious about the fate of their families, but it may be treated first. To a workman's family 50*l.* in cash at death means a good deal, means, in fact, nearly two years' maintenance, time to 'turn round' and see what is best to be done, without sacrificing furniture or turning out of doors. Well, if a workman resolves, as a middle-class man usually does, to begin payment at marriage, say 25, the demand on him will be less than sixpence a-week. Weekly payments are not favoured by the tables, though they are, as we gather, to be allowed; but, according to Table 5, a monthly sum of 2*s.*, beginning at 25, will secure at death 52*l.* 11*s.* 10*d.* Taking sixpence a week as the payment, the rates are:—

Age.	Sum at Death. £	s.	d.
20	59	8	5
25	52	11	10
30	46	1	10
35	39	17	10
40	34	1	10

"The young man who at 25 cannot afford sixpence a week, had better not marry, and Mr. Gladstone therefore offers him a means, beyond all risk of failure, or fraud, or people's votes, of placing his family as far out of pecuniary risk as an average professional man's family is—that is, of securing a certain income for two years. He may do it in many other different ways; may pay down a sum at once—it is 19*l.* 19*s.* 4*d.* at 25 for 50*l.*—or may pay a sum *and* weekly allowance, but at the worst he can pay the sixpence, and death is *pro tanto* struck out of the list of the causes of pauperism.

"The rates are higher for deferred annuities. They are not high for men even apparently, but 'old women never die' in the opinion of insurance offices, and the rates for the two sexes run to a high average. We take it that the working man reasoning about things usually expects to find himself declining somewhere about sixty. At all events, if he is not, he will be very glad of a help to wages, and it must be remembered that throughout these tables the annuity is a purchased right recoverable at law, and not dependent on medical certificates, or superannuation, or anything else except the contract. Taking the age of marriage, 25, as the time when a man settles himself, the workman will have to pay a shilling a-week in order to secure himself a life annuity of 8*s.* 6*d.* a-week after 60. If he can spare only that he will be but just off the union, but if he can spare 8*s.* a-month he gets 17*s.* 4*d.* a week or 40*l.* 1*s.* a-year, which is comparative competence. The rates, always excepting 60 as the age at which a man will want his pension, and eight shillings a-month as his payment, are:—

Age.	Monthly Government Pension at Sixty. £	s.	d.
15	5	8	11
20	4	3	9
25	3	3	5
30	2	7	3
35	1	14	4
40	1	4	0

Women get for the same payment, and at the same time, as nearly as possible, *one clear third less*, as they are expected to live longer.

"The drift of the tables is therefore this. A man who marries at 25, and will invest half-a-crown a-week with Mr. Gladstone, will at 60 have a life annuity of 40*l.* a-year, and at death 52*l.* bequeathable to anybody he likes, will in fact be with his family pretty fairly beyond want. Any master, moreover, or employer, can by that payment of half-a-crown secure to his foreman, or clerk, or other servant, 50*l.* a-year, and can, for what we see, sell the policy if his servant leaves him or is discharged—a point which wants more particulars. The saving of half-a-crown a-week supersedes the union. We do not expect, of course, that it *will* supersede the union, that men will grow wise all at once, or learn to distrust benefit clubs—which, moreover, pay for sickness—or even avoid the gin shop, but the State can wait a long while very patiently indeed; education is advancing, there is the machinery ready to be used, and there has been no such stroke levelled at involuntary pauperism in our time."

IV.—*The First Registration of Births, Deaths, and Marriages in Ireland.*

From the *Manchester Guardian:*—

"Obvious as are the advantages of a good system of registration, it has nevertheless taken more than a quarter of a century to establish a complete scheme of civil record for the United Kingdom. A Registrar-General for England and Wales was appointed, with statutory powers, in 1837; seventeen years afterwards a similar officer was given to Scotland; and only last year was Ireland in this respect placed upon an equality with Great Britain. Since each of the three kingdoms has now its own Registrar-General, who will make his quarterly report for that country alone over which he holds a recording jurisdiction, it will be for the press to bring the particulars together from these sources, and present to the public a summarised result for the United Kingdom. It will not be possible to have it *officially* quarter by quarter, because each Registrar-General will issue his own report irrespective of his brother officers' arrangements. In August last the Irish Registrar-General made his first quarterly report on births and deaths. It relates to the March quarter of 1864, but is very defective in the births. For the following quarter he was able to present a less exceptionable return; he then gave the marriages. Availing ourselves of the statements last published for England and Wales, Scotland, and Ireland, we can place before our readers for the first time the births, deaths, and marriages of the United Kingdom.

"The marriages are for the quarter ended with June last, and the births and deaths for the subsequent Michaelmas quarter:—

Countries.	Area in Statute Acres.	Population, 1861.	Marriages.	Births.	Deaths.
England and Wales....	37,324,883	20,066,224	44,596	180,752	112,133
Scotland	19,639,377	3,062,294	5,710	27,063	16,131
Ireland	20,322,641	5,798,967	6,029	33,892	19,259
United Kingdom	77,286,901	28,927,485	56,335	241,707	147,523

"Upon data so narrow as those obtainable from the returns of a single quarter, and so novel in respect to Ireland as the figures above, it would of course be absurd to attempt anything in the shape of generalization; we may, however, point out some relations which these figures disclose, without being amenable to the charge of rashness. The natural growth of the population during last midsummer quarter was 94,184, being the excess of births over deaths, or 64 per cent.; that is, to 100 deaths there were 164 births. In England and Wales the excess of births was 68,619, or 61 per cent.; in Scotland it was 10,932, or 68 per cent.; and in Ireland it was 14,633, or 76 per cent. These ratios must for the present be accepted provisionally. The birth-registers in the large cities and towns of England are notoriously defective, and in Ireland, though the registers have been nominally in use for the previous quarter, it appears that a considerable number of births which should have been recorded in the March quarter were, through error or neglect, thrown on the registers of the subsequent quarter. Taking the census of 1861 as the basis of comparison, it will be found that for the June quarter the death-rate in England and Wales was 5·6 per 1,000 of the population; that in Scotland it was 5·3; in Ireland, 3·3; and for the United Kingdom, 5·1 per 1,000. The low death-rate of Ireland we are certainly not prepared to take upon these figures. One source of the disparity between the Irish and the English and Scotch death-rates is obvious. We know that England since the census of 1861, which serves as the basis of comparison, has largely recruited her population; Scotland has moved in the same direction, but possibly not so rapidly; while in all probability Ireland has not materially increased, but may have receded. The marriage-rate, so far as it goes, will bear out this view. These rates, deduced from the data in the table

and for the March quarter only, are:—England and Wales, 2·2; Scotland, 1·9; and Ireland, 1·0 to every 1,000 of the population, the ratio for the United Kingdom coming out at 1·95.

"In grouping his registration districts, the Registrar-General for Ireland has partially followed the excellent system employed from the commencement by the English office. The Superintendent Registrar's districts, all of them being co-extensive with the poor-law unions, are placed according to their topographical affinities, under eight divisions, commencing in the north-east of Ireland, and terminating in the south-west. No division has a population under half a million souls, and the area of each varies from 1,826,000 to 4,088,000 statute acres. The density of population rises from 129 persons per square mile in the western division to 309 in the north-eastern division. With some alteration of detail, the following table is taken from the second quarterly report of the Irish General Registration Office.

Table of the Area, the Population in 1861, *the Number of Persons to the Square Mile, and the Number of Births and Deaths Registered during the Quarter ended with June,* 1864.

Divisions.	Area* in Statute Acres.	Population, in 1861.	Number of Persons to Square Mile.	Quarter ending 30th June, 1864.	
				Births.	Deaths.
North-Eastern	2,328,305	1,124,041	309	8,257	5,370
North-Western	2,392,501	574,745	154	3,212	2,346
Eastern	1,993,016	829,569	266	5,647	3,851
North Midland	2,019,408	575,289	182	3,461	1,973
South Midland	2,361,709	515,272	140	3,119	2,158
Western	4,088,459	822,878	129	4,917	2,676
South-Eastern	1,826,172	500,957	176	3,474	2,480
South-Western	3,313,071	855,813	165	6,614	3,594
Total of Ireland	20,322,641	5,798,967	183	38,701	24,448

* Exclusive of the larger rivers, lakes, and tideways.

"The ratio of births and deaths in each division has been computed upon a plan not uncommonly employed when one or two proportions have to be shown, but against which, as cumbersome and as incapable of rapid and nice appreciation of differences, we urgently protest. We will give a table compiled from the report, and submit the question to the judgment of our readers. The figures here represent the *annual* ratio of births and of deaths in Ireland, computed on the returns for the June quarter, and with reference to the population as it stood when the last census was taken:—

Divisions.	Proportion to Population.	
	Births.	Deaths.
North-Eastern	1 in 34	1 in 61
North-Western	1 „ 45	1 „ 52
Eastern	1 „ 37	1 „ 54
North Midland	1 „ 42	1 „ 73
South Midland	1 „ 41	1 „ 60
Western	1 „ 42	1 „ 77
South-Eastern	1 „ 36	1 „ 50
South-Western	1 „ 32	1 „ 60

"We see here that if there be 1 birth to every 34 of the inhabitants of the north-eastern division of Ireland, and 1 to every 45 in the north-western division, the latter is less fecund than the former section; but *how much* less we do not so easily perceive. Again, in the western division, the death-rate is expressed as 1 in 77; and in the south-eastern as 1 in 50. But what is the proportionate difference in the mortality as between the two divisions? This could be shown with facility if the Irish Registrar-General would be content in future to follow official custom and every-day common-sense in this portion of his labours, and represent his ratios upon a *fixed*, and not upon a changeable, basis. The facts to be compared must vary in the nature of things; but they may always be measured upon a settled, and therefore permanent, standard. To exemplify our meaning, we have placed in the subjoined statement the birth-rate and the death-rate for each province computed upon the Irish and upon the English methods in juxtaposition:—

	Ratio of the Population.			
	Births.		Deaths.	
	Irish Method, 1 in	English Method, per 1,000.	Irish Method, 1 in	English Method, per 1,000.
Leinster	38	26	55	18
Munster	34	29	60	17
Ulster	38	26	57	18
Connaught	41	24	77	13

"Looking to the death columns in the table, we perceive at once that the rate in Ulster being 18, and in Connaught 13 to the same base (1,000 persons living), the former province is in the proportion of 5 to the 1,000 more fatal to its inhabitants during one year than the latter. Surely this is plainer than saying the respective ratios are 1 in 57 and 1 in 77. The death-rate being computed *on*, not *out of*, the numbers living, we can say upon the Irish plan that $\frac{1}{58}$th and $\frac{1}{78}$th part of the population of the respective provinces was carried off by death in the year. But this is to prefer in our exponents the awkwardness of the common fraction over the commensurable exactness of the decimal. This the Irish office has done, in every ratio which it has computed for the quarterly reports. The decimal system is always employed in the English and in the Scotch tables of mortality; why should the Irish department deviate from so straight a path?

"The Irish report, like its English and Scotch analogues, gives a summary of 'meteorological observations' during the quarter; but at present we obtain nothing in the shape of pathological statistics. It would, indeed, be unreasonable to expect much in this field of research from a new office. The Irish department require their local registrars to note on the quarterly returns to the central office 'whether, in their opinion, the births or deaths were above or below the average, and whether smallpox, measles, scarlatina, or other epidemic diseases had been prevalent during the quarter.' This has been found to be a very useful practice in England, and the advantages are obvious when the remarks are made with ordinary care and intelligence. With the view of showing the manner in which the instructions from Dublin have been responded to by the registrars, we have selected a few specimens of the remarks from various divisions, all relative to the June quarter of 1864:—

"'Cookstown.—Cookstown: births, 73; deaths, 59. Smallpox is still epidemic. The number of cases is greater than I ever before remember during a similar period, but the disease has assumed a much milder type, as evidenced by the number of deaths therefrom, viz., 5 during the present quarter, against 10 during the previous quarter.

"'Sligo.—Sligo, south side: births, 87; deaths, 51. Nine deaths resulted

from measles, 4 from fever, 2 from bronchitis, and 19 from consumption. The registrar attributes the prevalence of the last-named disease to 'foul air from defective ventilation of houses, to impure water for drinking, and to the excessive use of adulterated teas, without a sufficiency of milk, butter, or animal food nutriment.'

"'MONAGHAN.—Monaghan: births, 48; deaths, 43. Smallpox has made its appearance in this district, and has occasioned great alarm, stimulating the people, old and young, to get vaccinated. Only few have died. The disease is on the decline.

"'CELBRIDGE.—Lucan: births, 37; deaths, 16. The registrar states:—'Although no epidemic prevails, yet the filthy and neglected state of the dwellings of the poor, together with the total absence of proper sewerage and other efficient sanitary measures, leaves us in a condition highly favourable to the outbreak of infectious disease.'

"'LOUGHREA.—Loughrea: births, 37; deaths, 28. During the quarter typhus fever has been more prevalent in this district than it was for a long time past: it caused 8 deaths.'

"The progress of the Irish registration will be watched by the public with great interest. If it meet with the success anticipated, it will remove the possibility of falling into any grave error hereafter as to the number of Ireland's denizens. In conjunction with the usual returns of pauperism, it will afford an unerring measure of the industrial condition of the working classes. When the schedules of Irish mortality are submitted to a statistician as competent to his work as England possesses in Dr. Farr, and no less zealous for the public welfare, we may then hope to obtain a satisfactory, because complete, account of the sanitary status of each division of the United Kingdom."

V.—*Lancashire's Lesson.*

THE following very timely remarks upon a grave economical question, the administration of relief to the poor during periods of exceptional distress, appeared in the *Athenæum* recently. These strictures were published in a review of Mr. McCullagh Torrens's book, *Lancashire's Lesson.**

"Whilst believers in a much-abused maxim are agreeing that the present may fairly leave the future to take care of its own evil, and are congratulating themselves that the cotton famine, as an old trouble that has come to an end, may be dismissed from consideration, Mr. Torrens opportunely assures them that the painful topic may not be thus put out of sight. The worst of the distress is over; but some of its most pernicious consequences will remain for many a day amongst the workmen of the cotton districts. The crisis has passed without any important breach of the peace; but the struggle between famine and benevolence has left us a legacy in the shape of 'a lesson.'

"Apart from its magnitude, the calamity was in no way exceptional to the usual operation of our industrial system, which yearly witnesses the waste of much valuable labour, and has no provision for the temporary employment of hands rendered idle, for weeks or months together, every time a hitch occurs in any productive department. On a smaller stage, and with less notoriety, the dismal tragedy of the cotton famine is enacted every year in one or another of our great cities. Every time fashion selects a new material for dress, or a new invention supersedes old contrivances, workmen are thrown out of employment. Where the evil is of such dimensions that the Poor Law can deal with it without unusual effort, it does not come under the observation of the general public; but those who think and act for the public will do well to ask themselves whether it is wise, on the occurrence of every fresh commercial crisis, to degrade honest workmen to the

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* Trübner and Co., London.

rank of paupers, simply because there is a less demand for a particular sort of labour,—whether it is sound economy to keep thousands of workmen in hurtful inactivity, whilst our towns are inadequately drained.

"Many persons still believe that the cotton crisis, as a consequence of the American war, was an affair altogether beyond our control; that if there had been no war, there would have been no silent mills; that when the distress came, it was met promptly and prudently; that the difficulty was surmounted without any severe injury to public morals; and that, since the Lancashire unions have ceased to hold the hat for national benevolence, there is nothing more to be done in the matter. They are greatly mistaken. The cotton famine was only in part due to the war; over-production had produced a glut of manufactured cotton, that would, under any circumstances, have thrown a great number of hands out of work. Had the Southern ports remained open, the mills would have all the same been shut. Instead of being an unexpected calamity, well-informed persons knew that the trouble was coming. Nature gave comparatively slight forewarning of the Irish famine; but commercial statistics gave long notice of the trial about to fall on Lancashire. No precautions, however, were taken against the certain results of the crisis; and when the evil arrived, our measures for exceptional relief did far more harm than good. What ought to have been done is now evident. At the outset the difficulty should have been left to the action of the Poor Law; and until the law had shown itself incompetent to deal with the emergency, private benevolence should have stood aloof. But instead of giving the Poor Law a fair trial, the public assumed its impotency, although some of the cotton-masters maintained, and still maintain, that the unions could, without external aid, have weathered the storm, had the Legislature promptly given them those powers of borrowing, which were tardily and reluctantly conceded. It still remains to be shown that Lancashire had actual need for a single sixpence of that vast sum of money which was sent to it in the shape of alms. But if the Poor Law, after fair trial, had broken down, public benevolence should not have come to the aid of the ratepayers, so much as to the aid of the honest people whose exceptional suffering distinguished them from habitual paupers. This was manifest to the noblemen and gentlemen over whom Lord Derby presided at Bridgewater House, in the summer of 1862. The chairman said that the public subscriptions would, no doubt, 'indirectly go to relieve the ratepayers, but it would be in a manner that separated the recipient of such charity from the habitual pauper.' He urged that the object of the subscription should be to enable people who were not of the pauper class 'to maintain their position and to keep themselves off the pauper list, to be placed upon which men in ther station considered—and justly considered—a great degradation.' For this purpose subscription lists were opened, before the efficiency of the Poor Law had been fairly tested. The call was answered with enthusiasm. Men gave liberally, in confidence that their donations would go to the deserving poor. Had they supposed that their money would be distributed amongst the riff-raff and blackguards of the Lancashire towns, as well as to respectable families, they would have closed their purses, and left Lancashire to provide for her own destitute population. But how was the trust discharged by the benevolent associations? They had scarcely set to work when they resolved not to give a doit to any applicant who was *not* a pauper. Before distressed persons could obtain relief from the fund, raised to keep them from 'the parish,' they were actually compelled to show the certificates that proved them to be in receipt of money from unions. Thus public benevolence broke down the very distinctions which it had declared itself most anxious to maintain. Demoralization ensued. People who have been reduced to a shameful position soon loose the sense of shame. It is a cruel fact, that the consequences of pauperization have surpassed the gloomiest apprehensions of those who predicted that the receipt of charity would have a bad result on the operatives as a class. With regret Mr. Torrens writes:—'We cannot help marking the readiness with which, on the first cessation of adequate wages, large numbers of persons now resort to rates and subscription funds, many of whom, three years ago, would have shrunk instinctively from such public avowal of indigence.' The author adds:—

'"In one of the reports of the Assistant-Clerk to the Manchester Board of Guardians, a lamentable summary is presented, of the effect upon a mixed population of indiscriminate charity as a substitute for labour. '*Almost every conceivable variety of fraud, it would appear, has been practised, as the reports of the special visitors prove every week. Children recently dead have been booked as living; children that never existed have been booked; children have been borrowed to make up families; concealment or misrepresentation of wages seems almost to have been the rule in some districts; men whose regular work was at night, have obtained relief for want of work in the daytime; sick men (so represented) have been found drunk in bed; men discharged by employers for drunkenness have obtained relief as decent, respectable artizans; persons have left employment avowedly because they could get a living easier by charity and parish relief than by work, &c., &c.*' Such were some of the fruits that ripened in the first twelve months of relaxed poor law discipline, and undiscriminating relief without labour. No wonder that many believed five-and-twenty per cent. of those who were publicly relieved in Manchester were not fit objects of such charity.'

"Had the Public Works Bill, instead of becoming law in June, 1863, been enacted in anticipation of the inevitable and foreseen crisis, or even at the first commencement of the distress, much of this social degradation would have been avoided. But though the Bill was not passed until matters were beginning to adjust themselves, it did much good. In its results Mr. Torrens sees the most gratifying part of Lancashire's lesson, and he is hopeful that it may lead to legislation which shall aim at the prevention as well as mitigation of disaster. Mr. Rawlinson the engineer testifies that 'unskilled men may soon be taught the use of tools, where practical means are found to furnish employment,' and the engineer's testimony is supported by the history of the Lancashire Public Works. Mr. Torrens therefore urges that amongst our precautionary measures against the mischief done by those dead-locks, to which labour and production are periodically liable, the foremost should be an act empowering unions to undertake public works, on which workmen, who would otherwise sink into pauperism, might contrive to support themselves and benefit their country until they should be able to obtain more lucrative and suitable work.

"Mr. Torrens is at great pains to impress on readers that he pleads only 'for a temporary shelter, not a permanent home for industry;' and that he in no way 'advocates the use of public money, whether as gift or loan, to constitute a permanent source of employment, at wages likely to detach men from other pursuits.' But though he thus faces one grand objection that may be made to his proposal, he fails to notice other evils which are inseparable from a system which strikes at the self-dependence of the workman, and teaches him to rely on the State rather than on his individual energy for the means of subsistence."

VI.—*Rate of Taxation in Great Britain and in Ireland.*

A Parliamentary paper recently issued affords in a small compass some interesting particulars of the relative pressure of taxation in Great Britain and in Ireland. The comparisons are made upon the "ordinary revenue" raised in each country with reference to their respective populations. But there is another way of measuring the pressure of an impost, namely, on the means of the people who have to bear it. The only official standard of this sort which we have in this country is the assessment under the property and income tax returns. In the year 1863, the value assessed in Great Britain was 300,481,000*l.*, and in Ireland 23,461,000*l.* The rate in the pound of the ordinary revenue of that year

would be for Great Britain 4*s.* 1*d.*, and for Ireland 5*s.* 6½*d.* The sum raised as income and property tax in the United Kingdom in 1863 was 11,249,000*l.*, of which Ireland only contributed 734,000*l.*

[000's omitted]

Years ended	Great Britain. Estimated Population.	Great Britain. Gross Receipts of Ordinary Revenue within the Year.	Great Britain. Proportion of such Revenue per Head of the Population.	Ireland. Estimated Population	Ireland. Gross Receipts of Ordinary Revenue within the Year.	Ireland. Proportion of such Revenue per Head of the Population.
		£	£ *s.* *d.*		£	£ *s.* *d.*
5 Jan. 1800	10,499,	34,612,	3 5 11	4,742,	3,335,	– 14 1
,, '17	13,154,	61,847,	4 14 –	6,173,	5,457,	– 17 8
,, '22	14,200,	56,607,	3 19 9	6,802,	5,040,	– 14 10
,, '42	18,551,	48,048,	2 11 9	8,175,	4,100,	– 10 –
31 Mar. 1862	23,244,	61,726,	2 13 1	5,790,	6,756,	1 3 4
,, '63	23,477,	61,768,	2 12 7	5,782,	6,500,	1 2 6

VII.—*Price of Meat*, 1842-64.

The Board of Trade have just laid before Parliament a statement of the average price of beef and mutton in the Metropolitan Cattle Market during the four years ended with 1845, compared with the four years ended with 1864. From the same paper we learn that the average price of British oats in England and Wales, per imperial quarter, was for each of the first four years 19*s.* 3*d.*, 18*s.* 4*d.*, 20*s.* 7*d.*, and 22*s.* 6*d.* respectively; and for the second four, 23*s.* 9*d.*, 22*s.* 7*d.*, 21*s.* 2*d.*, and 20*s.* 1*d.*

Years.	Beasts. (Per Stone of 8 lbs. sinking the Offal.) Inferior.	Second Class.	Third Class (Large Prime).	Fourth Class (Scots).	Sheep. (Per Stone of 8 lbs.) Inferior.	Second Class.	Third Class (Long Coarse Woolled).	Fourth Class (South Downs).
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
1842....	3 4¼	3 7	3 11¼	4 5¼	3 5½	3 10	4 1½	4 5¾
'43...	2 8¾	3 2½	3 7	3 10¼	3 –½	3 5	3 10	4 1
'44....	2 7¼	3 1	3 5¾	3 10¾	2 11	3 5¾	3 8¼	4 –½
'45....	2 9¾	3 5¼	3 9	4 1¼	3 4¼	3 10¼	4 3¾	4 9
1861....	3 3½	4 –	4 6	4 10¾	3 6¼	4 3¼	5 –¼	5 5¾
'62....	3 1½	3 8¾	4 3¼	4 7¾	3 8	4 3½	4 11	5 4½
'63 ..	3 7¾	4 2	4 8	4 11¾	4 –	4 7¼	5 1	5 5½
'64....	3 9	4 4¾	4 9¼	5 1	4 2½	4 9½	5 3½	5 8

VIII.—*Statistics of Irish Tillage in* 1863.

The subjoined extracts are taken from the last Report on the Agricultural Statistics of Ireland:—

"The acreage under tillage, grass, fallow, plantation,—and of bog and waste *unoccupied* in 1863, according to the returns received—was as follows :—

	Acres.
Under crops, including meadow and clover	5,662,487
„ grass or pasture	9,757,518
„ fallow.....	39,619
„ woods and plantations.....	317,134
„ bog and waste, *unoccupied*	4,543,166

Compared with 1862, these figures show a decrease of 91,123 acres under crops; in grass lands, an increase of 57,286 acres; fallow, a decrease of 1,385 acres; and woods and plantations, of 211 acres. Bog and waste *unoccupied*, would *appear* to have increased by 35,433 acres. In 1862 and 1863, 42·52 acres in every 100 were under cereals, being a decrease of 1·9 per cent. in 1863 compared with 1862. Green crops, including potatoes, occupied 25·81 acres in every 100—an increase of 0·1 per cent. Flax increased by 1·2 per cent., there being 2·6 acres in every 100 in 1862, and 3·8 in 1863. The proportionate area under rape was the same in both years—0·3 acres in every 100; and meadow and clover increased by 0·6 per cent.—the proportion per cent. in 1862 being 27·0, and in 1863, 27·6.

* * * * * *

"It appears that the greatest extent of wheat sown in any year from 1857 to 1863 was in 1857, when it amounted to 559,646 acres, from which time there has been an annual decrease to 1863, with the exception of 1860; in 1863 the extent was 260,311 acres. The largest area under oats in any year from 1857 to to 1863 was in 1861, when it amounted to 1,999,160 acres. Barley, bere, and rye, taken collectively, fluctuated from 232,662 acres in 1857 to 180,551 acres in 1863—a decrease of 52,111 acres. The extent under beans and peas was 13,586 acres in 1857, from which date it varied but little to 1863, when the area was 15,153 acres.

"The largest area under potatoes in any year from 1857 to 1863 was in 1859, when it amounted to 1,200,347 acres; the least was in 1862, the area being 1,018,112 acres. The reverse of this was the case with respect to turnips, mangel-wurzel, and other green crops, taken collectively; the largest area under these crops being in 1862, when the extent amounted to 463,772 acres; and the least in 1859, when the area was but 418,978 acres.

"The greatest breadth under flax from 1857 to 1863 was in the latter year, there being 214,099 acres sown; and the least in 1858, the area being only 91,646 acres. Rape varied from 13,460 acres in 1857 to 15,998 in 1863. Meadow and clover fluctuated from 1,369,892 acres in 1857 to 1,560,638 in 1863—an increase of 190,746 acres.

* * * * * *

"There has been a decrease in the extent under cereals in all the provinces in 1863 compared with 1862, amounting to 143,583 acres; in Ulster the decrease was 66,257 acres; in Munster, 34,739; in Connaught, 22,579; and in Leinster, 20,008 acres.

* * * * * *

"In Ulster there was an increase in the acreage under flax in every county in 1863, compared with 1858. Down had the greatest area in 1863, the extent being 44,963 acres, an advance of 32,697 acres. Tyrone had 32,007 acres, an increase of 16,900 acres. Londonderry, the next in point of extent sown, had 25,872 acres, an advance of 13,207 acres; in Donegal the area in 1863 was 24,132 acres; and in Armagh 24,001, being an increase of 7,652 acres in the former, and of 13,592 in the latter; the extent sown in the other counties of Ulster in 1863 was not so great, but compared with 1858, exhibits an increase. The area under flax in 1863, compared with 1858, in the provinces of Leinster, Munster, and Connaught—varying from 887 acres in Leitrim to 4 acres in Wicklow—shows an increase in 14 counties and a decrease in 8. There was no alteration in the county of Dublin, 1 acre having been returned in each year."

MARRIAGES, BIRTHS, AND DEATHS IN THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES during the Third Quarter (July—September) and of BIRTHS and DEATHS during the Fourth Quarter (October—December) of 1864.

This Return comprises the Births and Deaths registered by 2,200 Registrars in all the districts of England during the autumn quarter that ended on December 31st, 1864; and the Marriages in 12,717 churches or chapels, about 5,139 registered places of worship unconnected with the Established Church, and 641 Superintendent Registrars' offices, in the quarter that ended on September 30th, 1864.

The population goes on increasing. The weddings in the summer were much more numerous than they had ever been in the season. The births in the last quarter of the year were less numerous than the births of the corresponding quarter of 1863; but with that exception the number is higher than it has ever been since registration began. Death has, unhappily, also been unusually busy. No autumn death-rate has been observed in England higher than that of the last

England:—Marriages, Births, *and* Deaths, *returned in the Years* 1858-64, *and in the* Quarters *of those Years.*

Calendar Years, 1858-64:—*Numbers.*

Years.....	'64.	'63.	'62.	'61.	'60.	'59.	'58.
Marriages No.	—	173,388	164,030	163,706	170,156	167,723	156,070
Births..... ,,	739,763	729,399	712,684	696,406	684,048	689,881	655,481
Deaths..... ,,	495,520	475,582	436,566	435,114	422,721	440,781	449,656

Quarters *of each Calendar Year*, 1858-64.

(I.) Marriages:—*Numbers.*

Qrs. ended last day of	'64.	'63.	'62.	'61.	'60.	'59.	'58.
March .....No.	37,948	35,454	33,953	33,274	35,150	35,382	29,918
June ..... ,,	44,596	44,058	40,853	42,012	43,777	42,042	39,890
Septmbr..... ,,	44,650	41,902	40,600	39,884	40,541	39,803	38,599
Decmbr. .... ,,	—	51,974	48,624	48,536	50,688	50,496	47,663

QUARTERS *of each Calendar Year*, 1858–64.

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'64.	'63.	'62.	'61.	'60.	'59.	'58.
March .....No	192,926	186,653	181,990	172,963	183,180	175,532	170,959
June ..... ,,	188,641	189,611	185,554	184,820	174,028	175,864	169,115
Septmbr..... ,,	180,752	173,125	172,709	172,033	164,121	168,394	157,445
Decmbr. .... ,,	177,444	180,010	172,431	166,620	162,719	170,091	157,962

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'64.	'63.	'62.	'61.	'60.	'59.	'58.
March .....No.	143,030	128,524	122,019	121,215	122,617	121,580	125,819
June ..... ,,	116,899	118,375	107,392	107,558	110,869	105,631	107,142
Septmbr..... ,,	112,133	112,384	92,381	101,232	86,312	104,216	98,142
Decmbr. .... ,,	123,458	116,299	114,774	105,109	102,923	109,354	118,553

quarter, excepting in 1846, 1847, and 1858. Bread has been cheap, and employment, except in Lancashire, plentiful; but the weather has been cold, and the waters of the wells and streams have been scanty, as well as impure, through the deficiency of rainfall; of which the storage about dwelling-houses is everywhere deficient. Fever and scarlatina have ravaged several cities where the sanitary arrangements have never yet reached the great body of the population.

MARRIAGES.—The marriage of 89,300 persons is recorded in the quarter ending 30th September, 1864, the number of marriages being 44,650, or 2,748 in excess of the same quarter in 1863. The rate was 1·704 per cent., which is considerably above the average (1·597 per cent.), and is the highest rate that has been attained in any corresponding quarter, excepting in the September quarter of 1853, when the rate reached a maximum point of 1·718 per cent. The increase in the number of marriages, which presented itself so conspicuously after the bountiful harvest of 1863, has since been continuous, and points to the improved condition of the bulk of the population. Compared with the same quarter of 1863, the marriages in London increased from 8,031 to 8,546, in Staffordshire from 1,693 to 1,832, in Warwickshire from 1,148 to 1,293, in Cheshire from 908 to 1,060, in Lancashire from 6,091 to 6,539, in West Riding of Yorkshire from 3,464 to 3,809, in Durham from 1,100 to 1,241, and in Glamorganshire (including Merthyr Tydfil) from 741 to 913. The marriages were stationary in North Wales, and decreased in Hertfordshire, Buckinghamshire, Oxfordshire, Dorsetshire, Cornwall, Herefordshire, and Shropshire.

BIRTHS.—The births of 177,444 children (90,282 boys and 87,162 girls) were registered during the quarter ending 31st December, a number which, although above the average of the season, is less by 2,566 than that registered in the last quarter of 1863; the decrease is spread over many of the counties, but in the following the births are in excess of those in the corresponding season of 1863; Surrey, Kent, and Middlesex (extra-metropolitan), Cambridgeshire, Suffolk, Norfolk, Dorsetshire, Herefordshire, Shropshire, Staffordshire, Worcestershire, Rutland, Durham, Westmorland, Monmouthshire, and South Wales. The birth-rate was 3·376 per cent., against 3·461 in 1863, the average being 3·273.

ENGLAND:—*Annual Rates per Cent. of* PERSONS MARRIED, BIRTHS, *and* DEATHS, *during the* YEARS 1858-64, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1858-64:—*General Percentage Results.*

YEARS	'64.	Mean '54-'63.	'63.	'62.	'61.	'60.	'59.	'58.
Estmtd. Popln. of England *in thousands* in middle of each Year....	20,772	—	20,554	20,336	20,119	19,903	19,687	19,471
Persons Married Per ct.	—	1·661	1·688	1·614	1·628	1·710	1·704	1·604
Births .... ,,	3·561	3·450	3·549	3·504	3·461	3·437	3·504	3·366
Deaths.... ,,	2·385	2·214	2·314	2·147	2·163	2·124	2·239	2·309

QUARTERS *of each Calendar Year*, 1858-64.

(I.) PERSONS MARRIED:—*Percentages.*

Qrs. ended last day of	'64.	Mean '54-'63	'63.	'62.	'61.	'60.	'59.	'58.
March....Per ct.	1·472	1·379	1·404	1·360	1·346	1·422	1·464	1·252
June..... ,,	1·724	1·689	1·722	1·614	1·678	1·766	1·716	1·646
Septmbr. ,,	1·704	1·597	1·616	1·582	1·570	1·614	1·602	1·570
Decmbr. ,,	—	1·964	1·998	1·890	1·906	2·012	2·026	1·934

(II.) BIRTHS:—*Percentages.*

Qrs. ended last day of	'64.	Mean '54-'63.	'63.	'62.	'61.	'60.	'59.	'58.
March....Per ct.	3·740	3·605	3·698	3·644	3·500	3·707	3·631	3·576
June .... ,,	3·647	3·611	3·705	3·665	3·690	3·512	3·588	3·488
Septmbr. ,,	3·447	3·309	3·337	3·365	3·388	3·267	3·389	3·204
Decmbr. ,,	3·376	3·273	3·461	3·350	3·272	3·230	3·414	3·205

(III.) DEATHS:—*Percentages.*

Qrs. ended last day of	'64.	Mean '54-'63.	'63.	'62.	'61.	'60.	'59.	'58.
March....Per ct.	2·773	2·490	2·546	2·443	2·453	2·481	2·515	2·631
June ..... ,,	2·260	2·187	2·313	2·121	2·147	2·237	2·155	2·210
Septmbr. ,,	2·139	2·000	2·166	1·800	1·994	1·718	2·097	1·997
Decmbr. ,,	2·349	2·180	2·236	2·230	2·064	2·043	2·195	2·406

Increase of Population.—177,444 births were registered in the quarter ending 31st December, and there were 123,458 deaths during the same period, leaving a natural increase of 53,986 to the population, or 587 daily.

The number of emigrants in the quarter who left ports in the United Kingdom where emigration officers are stationed was 33,495,* being 12,972 less than in the previous quarter, and 9,628 less than in the same quarter of 1863.

12,192 of the emigrants were of English origin, of whom 4,905 sailed for the United States, 335 to the North American Colonies, 5,529 to the Australian colonies, and 1,423 to other places.

Of 15,080 emigrants of Irish origin, 10,756 went to the United States, and 3,897 to the Australian colonies. Emigrants of Scottish origin exhibited a preference for the Australian colonies, as of 2,491 who left these shores, 1,232 went to those colonies, and 1,019 to the United States.

The emigrants from the United Kingdom during the year were 208,900, of whom 57,971 were of English, 15,394 of Scotch, 118,188 of Irish origin, and 17,347 were foreigners.

Prices, Pauperism, and the Weather.—Owing to the accruing dividend the average quotation of Consols is somewhat higher than the low rate that prevailed in the previous quarter, the price now being $89\frac{5}{8}$ against $89\frac{1}{8}$ in the three months ending 30th September. Wheat sold at decreasing prices, the average for the three months being 38*s.* 5*d.* per quarter against 40*s.* 6*d.* in the corresponding period of 1863, and 48*s.* 2*d.* in 1862. The people have thus enjoyed the blessing of cheap bread during a cold period of the year. The high price of meat is a matter of daily experience with all consumers; in the last quarter of 1863 beef sold on an average at 4*d.* to $6\frac{1}{4}$*d.* per lb. (by the carcase) at Leadenhall and Newgate Markets, but in the quarter ending 31st December last the price ranged from $4\frac{1}{2}$*d.* to 7*d.*, according to quality. The wholesale price of mutton was 5*d.* to 7*d.* in the last quarter of 1863, and it was $5\frac{1}{4}$*d.* to $7\frac{1}{4}$*d.* in the same period of 1864. The growers and importers of meat will, we may hope, succeed in increasing the supply of an article of diet so necessary to the hard-working population of this country. The dry summer was prejudicial to the crop of potatoes, and the price of this essential vegetable and anti-scorbutic was 25 per cent. higher than in the autumn of 1863; the wholesale price of the best qualities was 60*s.* to 80*s.* in the last quarter of 1863, and rose to an average of 80*s.* to 95*s.* in the same quarter of 1864.

It is satisfactory to remark a decrease in the number of paupers receiving relief.

	In-door.	Out-door.
In the December quarter of 1862 the average number of persons relieved on the last day of each week was	132,663	907,493
Ditto ditto 1863.....	130,072	804,941
Ditto ditto '64.....	128,322	771,879

Mr. Glaisher discusses the meteorological features of the season at pp. 18-25. He states that:—

The weather at the beginning of the quarter was cold, and the average deficiency of daily temperature amounted to 2°. From the 12th October to the 29th the period was warm; an excess of temperature of $2\frac{3}{4}$° on the average of those days took place. A bitter cold period succeeded, continuing till the 12th November, during which a daily deficiency was experienced of no less than $5\frac{1}{4}$° of heat. From the 13th November to the 13th December the weather was generally warm, but

* Return with which the Registrar-General has been favoured by the Emigration Commissioners: of 33,495 emigrants the origin was undistinguished in 1,120 cases, which have been distributed by calculation.

there were cold periods of two and three days together; but upon the whole there was an excess of temperature averaging $2\frac{1}{4}^{\circ}$ daily. From the 14th December to the end of the quarter the weather was changeable. On the 17th the deficiency of temperature was as large as $15\frac{3}{4}^{\circ}$, and on the 20th there was an excess of 3°, followed again by a considerable deficiency, which generally prevailed; and the average defect of temperature from the 14th to the end of the month was nearly 4° daily. The mean temperature of the quarter at Greenwich was 43·70.

CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE, *in each of the Nine* QUARTERS *ended 31st December*, 1864.

1	2	3	4	5	6	7	8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the *Mean* Prices		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Mean Temperature.
			Beef.	Mutton.		In-door.	Out-door.	
1862	£	*s.* *d.*	*d.* *d.* *d.*	*d.* *d.* *d.*	*s.* *s.* *s.*			°
31 Dec.	$93\frac{5}{8}$	48 2	4—$6\frac{1}{4}$ $5\frac{1}{8}$	$5\frac{1}{4}$—$6\frac{3}{4}$ 6	90—110 100	132,663	907,493	45·0
1863								
31 Mar.	$92\frac{4}{8}$	46 7	4—$6\frac{1}{4}$ $5\frac{1}{8}$	5—7 6	120—130 125	143,661	948,212	42·6
30 June	$93\frac{1}{8}$	46 2	$4\frac{1}{4}$—$6\frac{1}{4}$ $5\frac{1}{4}$	$4\frac{3}{4}$—$6\frac{3}{4}$ $5\frac{3}{4}$	110—130 120	127,852	879,241	53·0
30 Sept.	93	45 7	$4\frac{1}{2}$—$6\frac{1}{4}$ $5\frac{3}{8}$	$4\frac{3}{4}$—$6\frac{3}{4}$ $5\frac{3}{4}$	70—105 87	120,189	819,795	58·8
31 Dec.	$92\frac{7}{8}$	40 6	4—$6\frac{1}{4}$ $5\frac{1}{8}$	5—7 6	60—80 70	130,072	804,941	46·8
1864								
31 Mar.	91	40 4	$4\frac{1}{2}$—$6\frac{1}{2}$ $5\frac{1}{2}$	$5\frac{1}{2}$—7 $6\frac{1}{4}$	55—70 62	139,606	855,728	37·9
30 June	$91\frac{4}{8}$	39 7	$4\frac{1}{4}$—$6\frac{1}{4}$ $5\frac{1}{4}$	$5\frac{1}{4}$—7 $6\frac{1}{8}$	40—60 50	122,717	785,825	53·1
30 Sept.	$89\frac{1}{8}$	42 3	$4\frac{1}{2}$—$6\frac{1}{2}$ $5\frac{1}{2}$	$5\frac{1}{2}$—7 $6\frac{1}{4}$	80—120 100	115,698	739,341	59·4
31 Dec.	$89\frac{5}{8}$	38 5	$4\frac{1}{2}$—7 $5\frac{6}{8}$	$5\frac{1}{4}$—$7\frac{1}{4}$ $6\frac{1}{4}$	80—95 87	128,322	771,879	43·7

The fall of rain was in defect to the amount of 1·7 in. in October, slightly above the average in November, and showed a deficiency of 1·3 in. in December. The amounts fallen are respectively 1·1 in., 2·6 in., and 0·6 in.

DEATHS; AND THE STATE OF THE PUBLIC HEALTH.—123,458 deaths (63,162 males and 60,296 females), were registered in the last 92 days of the year, a number never yet reached in any corresponding season since the commencement of registration. The rate of mortality during the quarter was 2·349 per cent.; this high rate has only been exceeded in the autumn season on three occasions, namely, in 1846 when it was as high as 2·545 per cent., in 1847 when it reached 2·389 per cent., and in 1858 when it attained 2·406 per cent.; the average of ten corresponding quarters

was 2·180 per cent. This excessive mortality deserves serious attention and thorough investigation; and it may be expected that the corporate bodies of the kingdom will be alive to the necessity of improving the sanitary condition of our towns, and of appointing medical officers of health, whose duties it will be to watch and keep the public informed of the state of health, to trace the progress and causes of the epidemics which periodically ravage our densely populated districts, and to suggest promptly the best means of bringing them into a healthy condition. The excess in the rate of mortality is spread over nearly all the divisions of England and Wales. In London the deaths were 19,636 against 18,857 in the same season of 1863. Many districts in the south-eastern counties shared in the high-rate of mortality, and suffered from scarlatina, although in other districts, including the Isle of Wight, the deaths were below the average. The tables show that most of the districts of the south midland counties were in an unhealthy state, and the same may be said of the eastern counties, particularly Norfolk; Norwich returns 572 deaths against 416 in the same period of 1863; Yarmouth has 233 against 195 in 1863 and 174 in 1862. In the south-western counties, scarlatina was very fatal, causing 18 out of 45 deaths in the sub-district of St. Thomas, 23 out of 60 deaths in the Brixham sub-district of Totness, 28 deaths in the sub-district of Tavistock, 19 out of 38 deaths in the Wiveliscombe sub-district of Wellington. 17 out of 61 deaths in the Yeovil sub-district were caused by scarlatina, and the drainage of the town is represented as being in a very bad state. The Registrar of the Lansdowne sub-district of Bath says:—

17 deaths have been registered from scarlatina, 3 from small-pox, one from measles, and one from diphtheria. Scarlatina still continues to prevail in this district. Better sanitary arrangements are required for the whole of the lower parts of the city, together with a better water supply, and an unpolluted river, freed from sewage.

Average Annual Rate of Mortality to 1,000 *of the Population in the Eleven Divisions of England in the Ten Years* 1851-60, *and in the Winter, Spring, Summer, and Autumn Quarters of* 1864.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in the				
	Ten Years, 1851-60.	Winter Quarter, 1864.	Spring Quarter, 1864.	Summer Quarter, 1864.	Autumn Quarter, 1864.
I. London	23·63	30·88	23·53	24·06	26·12
II. South-Eastern counties	19·55	24·18	19·41	18·66	19·37
III. South Midland „	20·44	26·53	21·61	20·43	22·66
IV. Eastern counties	20·58	24·51	21·25	19·05	20·86
V. South-Western counties	20·01	25·97	20·96	18·20	20·67
VI. West Midland „	22·35	27·57	22·32	21·55	23·77
VII. North Midland „	21·10	25·84	21·45	19·23	20·75
VIII. North-Western „	25·51	30·97	24·76	23·22	26·34
IX. Yorkshire	23·09	28·31	24·55	23·66	25·00
X. Northern counties	21·99	25·18	21·95	21·14	22·46
XI. Monmouthshire and Wales	21·28	26·28	22·97	20·17	23·59

The districts of the west midland counties have suffered severely from small-pox; scarlatina and typhus were also very fatal. In Clifton sub-district 29 deaths were from small-pox; in Leominster sub-district 26 out of 56 were from the same disease; in St. Mary, Shrewsbury, this disease was fatal in 20 instances; in the Wellington sub-district in 13; Burton-upon-Trent in 22. Scarlatina prevailed with great virulence in Wolverhampton, causing 69 deaths in the Bilston sub-district.

In West Bromwich small-pox, scarlatina, and typhus were very fatal. In Worcester a large number of persons have been vaccinated and re-vaccinated, which has materially checked the spread of small-pox. Birmingham and Aston have been severely visited by small-pox and scarlatina. The Registrar of the St. Martin's sub-district of Birmingham says :—

The deaths are above the average. Small-pox has been very prevalent, and proved fatal in 22 cases. Vaccination is frequently disregarded. There is no local medical officer of health in the town.

It is to be hoped that this important town, following the example of Liverpool and other places, will not long remain without the services of an efficient Officer of Health.

In the north midland counties several districts were visited by small-pox, scarlatina, and typhus, particularly Lincoln, where good water is represented as having been exceedingly scarce for a very long time.

Most of the districts of the north-western counties show a high rate of mortality, chiefly owing to the prevalence of small-pox, scarlatina, typhus, and measles. Liverpool suffered severely. The Registrar of the Mount Pleasant sub-district says :—

The deaths are considerably above the average, chiefly owing to the remarkable prevalence of typhus; not less than 310 deaths are ascribed to that disease, a large number of them occuring in the workhouse. Small-pox proved fatal in 32 cases; 20 deaths occurred from diarrhœa, and 19 from scarlatina.

The Officer of Health will no doubt meet with the active support of the local authorities in devising means to improve the sanitary condition of this populous and important town. In Prescot a very remarkable mortality prevailed; the deaths were 786 against 454 in the same season of 1863 and 443 in 1862. The sanitary state of the town is stated to be very bad; vaccination is neglected, and want of cleanliness is observable in the houses of the poorer classes.

ANNUAL RATE *of* MORTALITY *per Cent. in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1864-62.

	Area in Statute Acres.	Population Enumerated.		Quarters ending	Annual Rate of Mortality per Cent. in each Quarter of the Years			
		1851.	1861.		1864.	Mean '54-63.	1863.	1862.
In 142 Districts, and 56 Sub-districts, comprising the *Chief Towns*	3,287,151	9,155,964	10,930,841	March	2·974	2·678	2·705	2·655
				June....	2·369	2·332	2·478	2·267
				Sept. ..	2·374	2·253	2·404	1·984
				Dec.	2·601	2·441	2·462	2·525
				Year	2·580	2·426	2·512	2·358
				Year	2·116	1·974	2·064	1·890
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,037,732	8,771,645	9,135,383	March	2·508	2·280	2·343	2·184
				June	2·110	2·023	2·102	1·940
				Sept. ..	1·831	1·713	1·864	1·572
				Dec.	2·015	1·880	1·946	1·864

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

ENGLAND: — MARRIAGES *Registered in Quarters ended 30th September,* 1864-62; *and* BIRTHS *and* DEATHS *in Quarters ended 31st December,* 1864-62.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	MARRIAGES in Quarters ended 30th September.		
			'64.	'63.	'62.
ENGLD. & WALES.... *Totals*	37,324,883	No. 20,066,224	No. 44,650	No. 41,902	No. 40,600
I. London	77,997	2,803,989	8,546	8,031	8,082
II. South-Eastern	4,065,935	1,847,661	3,690	3,512	3,481
III. South Midland	3,201,290	1,295,497	2,196	2,152	2,032
IV. Eastern	3,214,099	1,142,580	1,695	1,651	1,642
V. South-Western	4,993,660	1,835,714	3,262	3,211	3,342
VI. West Midland	3,865,332	2,436,568	5,336	5,064	4,888
VII. North Midland	3,540,797	1,288,928	2,440	2,250	2,117
VIII. North-Western	2,000,227	2,935,540	7,599	6,999	6,380
IX. Yorkshire	3,654,636	2,015,541	4,806	4,386	4,123
X. Northern	3,492,322	1,151,372	2,467	2,294	2,272
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,613	2,352	2,241

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th December.			DEATHS in Quarters ended 30th December.		
	'64.	'63.	'62.	'64.	'63.	'62.
ENGLD. & WALES.... *Totals*	No. 177,444	No. 180,010	No. 172,431	No. 123,458	No. 116,299	No. 114,774
I. London	25,567	27,127	24,480	19,636	18,857	18,108
II. South-Eastern	15,194	15,524	15,054	9,441	9,269	8,884
III. South Midland	10,736	11,058	10,614	7,530	6,964	6,375
IV. Eastern	9,215	9,187	9,183	6,063	6,011	5,668
V. South-Western	14,248	14,588	14,786	9,625	9,716	8,801
VI. West Midland	22,310	22,144	21,321	15,307	13,303	14,277
VII. North Midland	10,949	11,204	10,948	6,886	7,058	6,390
VIII. North-Western	27,179	27,398	26,419	20,683	19,532	20,178
IX. Yorkshire	19,454	19,514	18,394	13,255	12,437	12,838
X. Northern	11,572	11,374	10,841	6,936	6,558	6,891
XI. Monmthsh. & Wales	11,029	10,892	10,391	8,096	6,594	6,364

REMARKS ON THE WEATHER

DURING THE QUARTER ENDING 31ST DECEMBER, 1864.

By JAMES GLAISHER, ESQ., F.R.S., *&c., Sec. of the British Meteorological Society.*

The weather at the beginning of the quarter was cold, and the average deficiency of daily temperature amounted to 2°. From the 12th October to the 29th the period was warm; an excess of temperature of $2\frac{3}{4}$° on the average of those days took place. A bitter cold period succeeded, continuing till the 12th November, during which a daily deficiency was experienced of no less than $5\frac{1}{4}$°. From the 13th November to the 13th December the weather was generally warm, but there were cold periods of two and three days together; but upon the whole there was an excess of temperature averaging $2\frac{1}{4}$° daily. From the 14th December to the end of the quarter the weather was changeable. On the 17th the deficiency of temperature was as large as $15\frac{3}{4}$°, and on the 20th there was an excess of 3°, followed again by a considerable deficiency, which generally prevailed; and the average defect of temperature from the 14th to the end of the month was nearly 4° daily.

Heavy gales of wind occurred in the months of October and November, causing a great many shipwrecks on the eastern and north-eastern coasts.

The mean temperature of October was 50°·5, being the same as the average of the preceding 23 years, but 1°·1 less than that in 1863.

The mean temperature of November was 42°·0, being 2°·1 below the average of the preceding 23 years, and $3\frac{3}{4}$° below that in 1863.

The mean temperature of December was $38\frac{1}{2}$°, being about 2° below the average of the preceding 23 years, and 4°·7 below that in 1863.

The temperature of the air decreased from September to October by 5° or 6° generally over the country. November was colder still by about 7° or 8°; and the decrease from November to December was 3° or 4° at most parts of the country.

The mean high day temperatures in the months of October, November, and December were 58°·2, 48°·5, and 42°·5, being 0°·5, 0°·6, and 2°·8 respectively below their averages.

The mean low night temperatures in the months of October, November, and December were 44°·1, 35°·5, and 33°·7, being of the same value as the average in October, and below their averages to the amount of 2° in the remaining two months.

Therefore *the days* were generally cold throughout the quarter, particularly in December; *the nights* in October were of the same temperature as their averages, but colder in November and December.

The mean temperature of the dew points were 2°·7, 2°·1, and 2°.7 below their respective averages.

The degree of humidity of the air was 78, 86, and 86 in October, November, and December respectively; the averages are 87, 89, and 88, saturation being represented by 100. There is no other instance on record in the month of October of a humidity less than 80, which took place in 1851. In 1844 it was as high as 96. The dryness of the air in October was remarkable.

The pressure of the atmosphere was slightly in defect in the month of October, in defect to 0·13 in. in November, and slightly in excess in December. It decreased from September to October by about 0·19 in. at southern stations, gradually changing to an increase of 0·27 in. at extreme northern stations. In November at southern stations it changed very little, but decreased gradually, going northwards, to 0·27 in. at Culloden. In December the pressure of the air increased 0·2 in. or 0·3 in. generally all over the country.

The fall of rain was in defect to the amount of 1·7 in. in October, slightly above the average in November, and showed a deficiency of 1·3 in. in December. The amounts fallen are respectively 1·1 in., 2·6 in., and 0·6 in.

The fall of rain in the year was 16·7 in.; the average yearly fall was 25·3 in. In the years 1858 and 1847 the falls were 17·8 in. in both years. In all other years back to 1815 the amount has exceeded 18 in., so that we have no certain evidence of a fall in one year so small as in the year 1864. The whole fall in the two years ending 1864 amounted to 36·7 in. only; the average for two years is 50·6 in.; the deficiency upon the two years is 13·9 in.

The mean temperature of the air at Greenwich in the three months ending November, constituting the three autumn months, was 49°·8, being 0°·3 above the average of the preceding 93 years.

1864. Months.	Temperature of Air. Mean.	Temperature of Air. Diff. from Average of 93 Years.	Temperature of Air. Diff. from Average of 23 Years.	Temperature of Evaporation. Mean.	Temperature of Evaporation. Diff. from Average of 23 Years.	Temperature of Dew Point. Mean.	Temperature of Dew Point. Diff. from Average of 23 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 23 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 23 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour in a Cubic Foot of Air. Diff. from Average of 23 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Gr.	Gr.
Oct.	50·5	+0·8	0·0	47·2	−1·4	43·7	−2·7	14·1	−0·5	52·9	·285	−·032	3·3	−0·4
Nov.	42·6	−0·4	−2·1	40·2	−1·5	37·9	−2·1	13·0	+1·4	44·6	·228	−·025	2·6	−0·2
Dec.	38·5	−0·5	−1·9	36·7	−2·2	34·4	−2·7	8·8	−0·8	—	·199	−·024	2·3	−0·3
Mean.....	43·7	0·0	−1·3	41·4	−1·7	38·7	−2·5	12 0	0·0	—	·237	−·027	2·7	−0·3

1864. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 23 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 23 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 23 Years.	Rain. Amnt.	Rain. Diff. from Average of 47 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was At or below 30°.	Between 30° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
			In.	In.	Gr.	Gr.	In.	In.	Miles.				°	°
Oct.	78	− 9	29·684	−·012	539	0	1·1	−1·7	248	4	16	11	27·7	51·3
Nov.	86	− 3	29·626	−·128	547	− 1	2·6	+0·2	245	13	16	1	18·0	41·6
Dec.	86	− 2	29·863	+·042	556	+ 4	0·6	−1·3	219	14	15	2	14·8	43·0
Mean.....	83	− 5	29·724	−·033	547	+ 1	Sum 4·3	Sum −2·8	Mean 226	Sum 32	Sum 46	Sum 14	Lowest 14·8	Highst 51·3

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND:—*Meteorological Table, Quarter ended 31st December*, 1864.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·599	64·5	32·5	32·0	19·5	16·2	47.9	84
Ventnor	29·579	62·0	38·0	34·0	21·3	7·5	47·2	84
Barnstaple	29·607	69·0	18·5	32·8	32·8	11·8	45·2	84
Royal Observatory	29·688	67·2	17·3	49·9	31·5	12·0	43·7	83
Royston	29·582	66·3	18·5	47·8	32·7	12·6	43·9	85
Lampeter	29·621	65·0	14·5	50·5	34·7	12·6	43·4	91
Diss (Norfolk)	29·696	66·0	15·0	51·0	34·6	13·9	43·6	91
Belvoir Castle ...	29·576	63·0	15·0	48·0	33·0	11·6	42·6	82
Liverpool	29·571	61·2	24·6	36.6	21·3	7·1	45·7	79
Wakefield	29·617	62·7	16·5	46·2	34·5	11·7	43·6	91
Stonyhurst	29·590	59·8	21·2	38·6	27·8	9·6	42·7	86
North Shields	29·676	59·0	25·0	34·0	25·4	7·7	43·2	87

10	11	12	13	14	15	16	17	18
	WIND.						RAIN.	
NAMES OF STATIONS.	Mean estimated Strength.	Relative Proportion of				Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·4	8	9	7	7	5·4	42	11·2
Ventnor	—	6	11	6	8	—	34	6·9
Barnstaple	—	4	12	7	8	3·9	31	6·2
Royal Observatory	0·2	6	8	10	7	7·1	29	4·9
Royston	—	6	8	10	7	6·5	55	4·2
Lampeter	0·8	5	12	9	5	6·7	42	10·7
Diss (Norfolk)	—	7	9	9	6	7·2	39	3·7
Belvoir Castle	1·3	4	7	13	7	6·8	39	5·3
Liverpool	0·8	5	13	8	5	7·7	43	7·7
Wakefield	1·5	7	8	8	8	7·6	55	8·1
Stonyhurst	0·6	9	10	5	7	8·2	53	10·4
North Shields	1·7	5	8	9	9	6·4	55	9·6

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 30TH SEPTEMBER, 1864.

This Return comprises the number of BIRTHS, DEATHS, and MARRIAGES entered on the registers of the 1,010 districts into which Scotland is divided for the purposes of registration, during the quarter ending 31st December, 1864. During that period there were registered 27,213 births, 17,151 deaths, and 6,639 marriages; being in the annual proportion of 3·49 births, 2·19 deaths, and 0·85 marriages in every hundred persons of the estimated population. Hence it appears that births, deaths, and marriages have all been above the mean average of the corresponding quarter of the nine previous years.

BIRTHS.—27,213 births were registered in Scotland during the quarter ending 31st December, 1864, being in the annual proportion of 349 births in every 10,000 persons of the estimated population. This is the highest birth-rate which Scotland has ever exhibited during the corresponding quarter of the past ten years, and is greatly above the mean average birth-rate, which was only in the proportion of 336 births in every 10,000 persons of the estimated population. Even this latter rate is much above the proportion of births in England, seeing that a ten years' average shows, that in England births occurred during the corresponding quarter at the rate of 327 births in every 10,000 persons of the estimated population.

The town and rural districts exhibited the usual difference in the proportion of births. Accordingly the 126 town districts (which embrace all the towns with populations of 2,000 and upwards), registered 15,579 births, while the 884 country districts (embracing the remainder of the population of Scotland) registered 11,634 births; thus indicating an annual proportion of 376 births in every 10,000 persons in the town districts, but only 318 births in a like population in the rural districts.

TABLE I.—*Rates per Cent. of the Illegitimate Births in the Divisions and Counties of Scotland during the Quarter ending 31st December*, 1864.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	10·0						
Northern	5·0	Shetland	3·9	Forfar	12·2	Lanark	8·2
		Orkney	3·6	Perth	10·0	Linlithgow .	6·5
North-Western	7·4	Caithness	7·4	Fife	7·5	Edinburgh .	9·1
North-Eastern	16·5	Sutherland...	4·4	Kinross	8·7	Haddington	12·1
East Midland ..	10·1	Ross and Cromarty	5·5	Clackmannan	6·3	Berwick	12·9
						Peebles.....	6·4
West Midland.	8·4	Inverness	9·3	Stirling	8·6	Selkirk	12·1
		Nairn	3·0	Dumbarton ..	7·6	Roxburgh ..	10·2
South-Western	8·2	Elgin	11·4	Argyll	7·2	Dumfries	18·8
South-Eastern.	9·4	Banff	18·0	Bute	10·9	Kirkcudbright ..	15·8
		Aberdeen	17·7	Renfrew.....	7·2		
Southern	16·1	Kincardine....	14·9	Ayr.....	9·1	Wigtown	19·4

Of the 27,213 births, 24,491 were legitimate, and 2,722 illegitimate; being in the proportion of one illegitimate in every ten births, or 10 per cent. of the

births as illegitimate. As usual, the proportion of illegitimate births in the town districts was lower than that in the rural districts; for while only 9·6 per cent. of the births in the town districts were illegitimate, 10·4 per cent. were illegitimate in the rural districts. Table I. exhibits the proportion of illegitimate births in the several divisions and counties of Scotland, and generally accords with previous returns, the north-eastern and southern divisions of Scotland exhibiting a very much higher proportion of illegitimate births than any of the other divisions. Thus only 5 per cent. of the births were illegitimate in the northern division, 7·4 per cent. in the north-western division, and 8·2 per cent. in the south-western division, which is the great centre of manufactures and mining; while in the southern division 16·1 per cent., and in the north-eastern division 16·5 per cent. of the births were illegitimate.

Of the children born during the quarter, 13,849 were boys, and 13,364 girls; being in the low proportion of 103·6 boys for every 100 girls. During the previous quarter the proportion was 106 boys for every 100 girls. 9,225 births were registered during October, 8,756 during November, and 9,232 during December.

Deaths.—17,151 deaths were registered during the fourth quarter of 1864, being in the annual proportion of 219 deaths in every 10,000 persons of the estimated population. This is a death-rate greatly above the mean of the quarter for the nine previous years, which was only at the rate of 205 deaths in every 10,000 persons; and was only equalled in the fourth quarter of 1858, when the proportion was the same as that of the past quarter.

The usual difference in the mortality in the town and rural districts was observed. Thus, in the 126 town districts, 11,072 deaths were registered, but only 6,079 in the 884 rural districts, indicating that during the quarter the population of the town districts was cut off at the annual rate of 267 deaths in every 10,000 persons; but in the rural districts only at the rate of 166 deaths in a like population.

Table II.—*Number of Births, Deaths, and Marriages in Scotland, and in the Town and Country Districts during the Quarter ending 31st December, 1864, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated, 1864.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,118,701	27,213	3·49	28	2,722	10·0	10·0
126 town districts	1,603,875	1,656,132	15,579	3·76	26	1,502	9·6	10·3
884 rural „	1,458,419	1,462,569	11,634	3·18	31	1,220	10·4	9·5

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated, 1864.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,118,701	17,151	2·19	45	6,639	0·85	117
126 town districts	1,603,875	1,656,132	11,072	2·67	37	3,979	0·96	104
884 rural „	1,458,419	1,462,569	6,079	1·66	60	2,660	0·59	169

TABLE III.—*Number of Births, Deaths, and Marriages in Scotland, and their each Quarter of the Years*

	1855.		1856.		1857.		1858.		1859.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	19,605	2·64	25,129	3·37	26,010	3·47	26,022	3·45	25,988	3·42
Deaths	19,559	2·64	16,018	2·15	16,684	2·22	17,321	2·29	17,102	2·25
Marriages	3,931	0·53	4,499	0·60	4,988	0·66	4,486	0·59	4,890	0·64
Mean Temperature	33°·0		37°·8		38°·1		38°·2		41°·0	
2nd Quarter–										
Births	25,402	3·43	26,848	3·60	27,381	3·65	27,846	3·69	28,510	3·76
Deaths	15,324	2·06	14,684	1·97	15,526	2·07	15,657	2·07	15,653	2·06
Marriages	5,131	0·69	5,241	0·70	5,435	0·72	4,927	0·65	5,150	0·67
Mean Temperature	47°·7		48°·1		49°·9		50°·7		50°·1	
3rd Quarter—										
Births	23,818	3·21	24,636	3·30	24,856	3·31	24,905	3·30	25,956	3·42
Deaths	12,968	1·75	12,861	1·72	14,713	1·96	14,012	1·85	13,340	1·76
Marriages	4,195	0·56	4,549	0·61	4,470	0·59	4,081	0·54	4,626	0·61
Mean Temperature	56°·3		54°·8		58°·0		56°·1		56°.4	
4th Quarter—										
Births	24,524	3·31	25,208	3·38	25,168	3·35	25,245	3·34	26,089	3·44
Deaths	14,153	1·91	14,966	2·00	14,983	2·00	16,549	2·19	15,619	2·06
Marriages	6,423	0·86	6,451	0·86	6,476	0·86	6,161	0·81	6,535	0·86
Mean Temperature	39°·7		42°·1		46°·1		41°·4		39°·7	
Year—										
Population.	2,962,500		2,979,855		2,997,210		3,014,565		3,031,921	
Births	93,349	3·15	101,821	3·41	103,415	3·45	104,018	3·45	106,543	3·51
Deaths	62,004	2·09	58,529	1·96	61,906	2·06	63,539	2·10	61,714	2·03
Marriages	19,680	0·66	20,740	0·69	21,369	0·71	19,655	0·65	21,201	0·69

5,313 deaths were registered in October, 5,674 in November, and 6,164 in December, indicating that 171 persons died daily in Scotland during October, 189 daily during November, and 199 daily during December.

INCREASE OF THE POPULATION.—As the births numbered 27,213, and the deaths 17,151, the natural increase of the population during the quarter, through the excess of births over deaths, amounted to 10,062 persons. From a return furnished to the Registrar-General by the Emigration Commissioners, it appears that 33,495 persons emigrated from the Ports of Great Britain and Ireland during the quarter ending 31st December, 1864. Of these, 11,784 were English, 2,408 Scotch, 14,576 Irish, 3,607 Foreigners, while of 1,120 the origin was not ascertained. If to the number of Scotch Emigrants 83 be added as the proportion of those whose

Proportion to the Population, Estimated to the Middle of each Year, during 1855 to 1864 inclusive.

1860.		1861.		1862.		1863.		1864.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
27,118	3·55	25,425	3·31	27,107	3·51	26,729	3·44	28,177	3·61	*1st Quarter*— Births
20,223	2·65	17,929	2·33	19,412	2·51	19,227	2·47	22,576	2·89	Deaths
4,802	0·63	4,619	0·60	4,750	0·61	5,090	0·65	5,333	0·68	Marriages
36°·0		38°·9		38°·8		40°·9		35°·7		Mean Temperature
28,292	3·71	29,200	3·80	28,745	3·73	29,651	3·82	29,992	3·84	*2nd Quarter*— Births
18,182	2·38	15,934	2·07	17,382	2·25	17,947	2·31	18,445	2·36	Deaths
5,329	0·69	5,310	0·69	5,172	0·67	5,557	0·71	5,710	0·73	Marriages
48°·2		50°·6		49°·4		49°·0		49°·9		Mean Temperature
24,914	3·26	26,146	3·41	25,798	3·34	26,362	3·40	27,063	3·47	*3rd Quarter*— Births
13,875	1·82	13,402	1·74	14,227	1·84	16,249	2·09	16,131	2·06	Deaths
4,514	0·59	4,463	0·58	4,558	0·59	4,863	0·62	4,993	0·64	Marriages
53°·9		56°·0		54°·4		53°·9		54°·5		Mean Temperature
25,305	3·31	26,265	3·42	25,484	3·30	26,583	3·42	27,213	3·49	*4th Quarter*— Births
15,890	2·08	15,022	1·95	16,145	2·09	17,998	2·32	17,151	2·19	Deaths
6,580	0·86	6,436	0·84	6,066	0·78	6,577	0·84	6,639	0·85	Marriages
39°·7		42°·0		42°·0		43°·6		42°·0		Mean Temperature
3,049,277		3,066,633		3,083,989		3,101,345		3,118,701		*Year*— Population
105,629	3·46	107,036	3·49	107,138	3·47	109,325	3·52	112,445	3·65	Births
68,170	2·23	62,287	2·03	67,159	2·17	71,421	2·30	74,303	2·35	Deaths
21,225	0·69	20,828	0·67	20,544	0·66	22,087	0·71	22,675	0·72	Marriages

origin was not ascertained, the total Scotch Emigrants would amount to 2,491 persons, and these deducted from the excess of births over deaths would leave 7,571 as the increase of the population during the quarter. This makes no allowance, however, for migration to England or Ireland, nor for drafts to the Army, Navy, and Merchant Shipping.

Marriages.—6,639 marriages were registered in Scotland during the fourth quarter of the year 1864, being in the annual preportion of 85 marriages in every 10,000 persons of the estimated population. This is a slightly higher proportion than the average of the corresponding quarter in the nine previous years, which was at the rate of 84 marriages in every ten thousand persons.

SCOTLAND:—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended 31st December*, 1864.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1861. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND.....*Totals*	19,639,377	3,062,294	6,639	27,132	17,151
I. Northern	2,261,622	130,422	198	927	607
II. North-Western.....	4,739,876	167,329	272	1,188	713
III. North-Eastern	2,429,594	366,783	827	3,159	1,562
IV. East Midland	2,790,492	523,822	1,220	4,454	2,948
V. West Midland	2,693,176	242,507	433	1,990	1,167
VI. South-Western	1,462,397	1,008,253	2,392	10,099	6,996
VII. South-Eastern	1,192,524	408,962	916	3,823	2,327
VIII. Southern	2,069,696	214,216	381	1,573	836

No. III.—IRELAND.

MARRIAGES IN THE QUARTER ENDED 30TH SEPTEMBER, 1864; AND BIRTHS AND DEATHS IN THE QUARTER ENDED 31ST DECEMBER, 1864.

This return includes the number of MARRIAGES *registered* during the months of July, August, and September; and the number of BIRTHS and DEATHS *registered* in the months of October, November, and December, 1864, in the 719 Registrars' districts of Ireland. An addition of one has been made to the number of districts since the publication of the last Quarterly Return; the Lords Justices having approved of the recommendation of the Registrar-General to divide the district of Ballinrobe (in pursuance of the authority conferred by the Act 26 Vic., cap. 11, sec. 18), into two districts, one to be called Ballinrobe and the other Cappaghduff. This alteration came into effect on the 1st of October, the commencement of the quarter with which we are at present about to deal.

The registration districts are co-extensive with the dispensary districts of the 163 Poor Law Unions.

MARRIAGES.—The number of marriages *registered* during the three months ending September 30, 1864, amounted to 5,414, being equal to an annual ratio of 1 marriage to every 268 of the population of Ireland.* This is the lowest number that has been registered during any quarter since the Registration Act (26 and 27

* According to the Census of 1861.

Vic., c. 90) came into operation. In the first quarter the number *registered* amounted to 9,578, during the second quarter the number *registered* was 6,029, making for the nine months a total of 21,021, a number equal to an annual ratio of 1 in 207.

Births.—The number of births *registered* in the quarter ending December 31, 1864, amounted to 33,720, affording an annual ratio of 1 birth to every 43 of the population.* The number *registered* during the first quarter of the year amounted to 30,330, affording an annual ratio of 1 in 48; the number *registered* during the second quarter amounted to 38,701 or 1 in 37; the number *registered* during the third quarter amounted to 33,892 or 1 in 43 of the population.*

Deaths.—The number of deaths *registered* during the quarter ending December 31, was 21,828, being equivalent to an annual ratio of 1 death in every 66 of the population.* The number *registered* in the first quarter of the year amounted to 28,540 or 1 in 51; the number *registered* in the second quarter was 24,448 or 1 in 59; and during the third quarter of the year, the number *registered* amounted to 19,259 or an annual ratio of 1 in 75 of the population.*

THE YEAR 1864.

Births.—During the year 1864 the number of births *registered* in Ireland amounted to 136,643, or 70,254 boys, and 66,389 girls; being equal to 94·5 of the latter to 100 of the former, affording a ratio of 1 in 42·4 or 2·36 per cent. of the population.* The low birth-rate may be attributed to two causes—the decrease in the population by emigration, and the great difficulties the Registrars have had to contend with in carrying out the provisions of so recent an enactment as that for the registration of births and deaths. The ratio (42·4) afforded by the number of births returned although calculated on the population of 1861,* is very approximate to the ratio which would be afforded by the estimated population in Ireland on the 1st of January, 1864; since, assuming the birth-rate and death-rate to have been the same as in England and Wales (1 in 31 and 1 in 45 respectively) during the period intervening between the taking of the Census in 1861 and January, 1864 (the commencement of registration), and deducting the decrease by emigration, the population on the 1st of January, 1864, would have been 5,723,516 (see table at foot); and the births *registered* during the year, calculated upon this number, affords a ratio of 1 in 41·89.

Deaths.—The number of deaths *registered* in 1864 amounted to 94,075—46,873 males and 47,202 females, or 99·3 of the former to 100 of the latter—affording a ratio of 1 in 61·6 or 1·62 per cent. of the population;* or, if calculated upon the estimated number of inhabitants in Ireland on the 1st of January, 1864, a ratio of 1 in 60·84.

Table showing the Population by the Census in 1861, *and the Probable Number of Inhabitants in Ireland on the* 1st *January*, 1862, 1863, *and* 1864 *respectively; the Number of Births and Deaths being estimated according to the Ratios in England and Wales.*

Dates.	Population.	Estimated Number of Births (1 in 31).	Estimated Number of Deaths (1 in 45).	Decrease by Emigration.†	Excess of Emigration and Deaths over Births.
On 7th April, 1861	5,798,967	137,350	94,619	47,024	4,293
„ 1st Jany., '62	5,794,674	186,925	128,771	70,117	11,963
„ 1st „ '63	5,782,711	186,539	128,505	117,229	59,195
„ 1st „ '64	5,723,516	—	—	—	—

* According to the Census of 1861.

† According to the returns obtained by the Registrar-General.

Emigration.—During the year 1864 the number of persons who left the ports of Ireland, having stated to the Enumerators "that it was *not their intention to return*," amounted to 114,169.

Meteorological Observations.—The following meteorological observations, taken at the Ordnance Survey Office,* Phœnix Park, Dublin, during the year 1864, have been furnished by Captain Wilkinson, R.E., by direction of the Superintendent of the Ordnance Survey.

During the last quarter of the year the mean height of the barometer was 29·686 inches; the highest reading (30·587 inches) occurred on the 6th November, at 9·30 A.M., wind S.E.; the minimum reading (28·390 inches) was on the 13th of the same month, at 9·30 P.M., the wind at the time blowing from the same point.

The mean temperature of the air during the last quarter was 44·4°; the maximum registered by the thermometer was 61·1°; and the minimum was 17·2°.

The rain-fall during the quarter measured 11·051 inches; of this quantity 6·167 inches or more than one-half, fell during the month of October.

There was an unusual prevalence of easterly winds during the quarter; it having blown from that quarter on 24 days, viz., on 14 days in October, 5 days in November, and 5 days in December.

Meteorological Observations taken at the Ordnance Survey Office, Phœnix Park, Dublin.

1864. — Months.	Barometer.			Thermometer.			Mean of Dry Bulb.	Rain-fall.
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.		
	Inches.	Inches.	Inches.	°	°	°	°	Inches.
October	30·333	28·724	29·706	61·1	33·0	49·3	49·2	6·167
November ...	30·587	28·390	29·556	60·0	27·8	43·5	43·6	3·311
December	30·463	29·118	29·796	55·2	17·2	40·4	39·9	1·573
Mean	30·461	28·744	29·686	58·8	26·0	44·4	44·2	Total. 11·051
Mean of year 1864	30·279	29·102	29·763	66·7	28·7	49·0	49·4	Total. 24·348

1864. — Months.	Direction of the Wind at 9·30 A.M. — Number of Days the Wind blew from the							
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
October	2	5	14	2	—	2	4	2
November	1	—	5	3	4	8	6	3
December	—	3	5	2	4	10	7	—
Total	3	8	24	7	8	20	17	5
Total of year 1864	21	31	69	21	23	93	79	24

* Latitude, 53° 21′ 44″·65 north. Longitude 6° 21′ 6″·35 west. Height above the sea, 158·8 feet

Comparison of Results by Divisions.—*Births.*—Comparing one division with another as to the number of births registered in proportion to their population during the quarter ending December 31st, it is found that the north-eastern division ranks first, the ratio being 1 in 38; the western division 1 in 40; the eastern 1 in 41; the south-western 1 in 42; the north-western 1 in 48; the south-eastern, 1 in 48; the north-midland, 1 in 48; and the south-midland, 1 in 51.

The Numerical Order of the Eight Divisions as regards the Annual Rate afforded by the Number of Births Registered during each Quarter of the Year 1864, *is shown by the following statement.*

	Quarter ending			
	31st March, 1864.	30th June, 1864.	30th September, 1864.	31st December, 1864.
I. South-Western	1 in 39	1 in 32	1 in 42	1 in 42
II. South-Eastern	,, 42	,, 36	,, 44	,, 48
III. South Midland	,, 48	,, 41	,, 48	,, 51
IV. North-Eastern	,, 48	,, 34	,, 40	,, 38
V. Eastern	,, 48	,, 37	,, 39	,, 41
VI. North Midland....	,, 53	,, 42	,, 46	,, 48
VII. Western	,, 55	,, 42	,, 43	,, 40
VIII. North-Western....	,, 56	,, 45	,, 49	,, 48

From the foregoing it will be observed that the south-western division, which ranked first for the first and second quarters of the year, occupied the third place for the third quarter, and occupies the fourth place in the last quarter; on the contrary, the western division which occupied the seventh place in the first and second quarters, rose to the fourth place for the third quarter, and to the second place for the last quarter. The north-western division, which held the last place during the first, second, and third quarters, ranges fifth for the last quarter. Taking the total number of births registered during the year, the divisions rank as follow :—

Statement showing the Ratio to the Population afforded by the Number of Births Registered in each of the Divisions, in the Year* 1864.

1. South-Western	1 in 38·2	5. Western	1 in 44·4
2. North-Eastern	,, 39·6	6. South Midland	,, 46·8
3. Eastern	,, 40·8	7. North Midland	,, 46·9
4. South-Eastern	,, 42·1	8. North-Western	,, 49·0

Deaths.—Comparing the divisions, with regard to the number of deaths in each during the quarter ending December 31, according to the population in 1861, the following is the result :—The eastern ranks first, with an annual ratio of 1 in 55; the others follow thus :—The south-eastern, 1 in 57; the north-eastern 1 in 60; the south-western, 1 in 64; the south midland, 1 in 68; the north-western 1 in 79; the north-midland, 1 in 82; and the western, 1 in 87.

* According to the Census of 1861.

The following Statement shows the Eight Divisions, Arranged according to the Annual Rate of Mortality in each, during the Quarters of the Year 1864.

	Death-rate, Quarter ending			
	31st March, 1864.	30th June, 1864.	30th September, 1864.	31st December, 1864.
I. South-Eastern	1 in 43	1 in 50	1 in 67	1 in 57
II. Eastern	„ 43	„ 54	„ 64	„ 55
III. North-Eastern	„ 46	„ 52	„ 69	„ 60
IV. South Midland	„ 50	„ 60	„ 74	„ 68
V. South-Western....	„ 53	„ 60	„ 73	„ 64
VI. North-Western....	„ 56	„ 61	„ 82	„ 79
VII. North Midland....	„ 58	„ 73	„ 92	„ 82
VIII. Western	„ 67	„ 77	„ 100	„ 87

From the above, it may be observed that the mortality, in proportion to the population, in each of the four quarters of the year, has been highest in the three divisions situated on the eastern coast. Little change has taken place in the numerical order of the divisions during the four quarters; the south-western held the fifth place in the first and second quarters, and the south midland held the fourth place in the first and second quarters; in the third and fourth quarters the order was reversed, the south-western holding the fourth-place, the south midland the fifth. In the third and fourth quarters the divisions ranked the same with regard to mortality, in proportion to the population.* It will be observed that in each of the divisions the rate of mortality was greater during the last quarter than it had been during the third quarter of the year. With regard to the total number of deaths registered in each of the divisions during the year, the numerical order was as follows :—

Statement showing the Ratio of Mortality to the Population in each of the Divisions for the Year 1864.

1. South-Eastern	1 in 52·9	5. South-Western	1 in 61·6
2. Eastern	„ 53·1	6. North-Western	„ 67·8
3. North-Eastern	„ 55·4	7. North Midland	„ 74·0
4. South Midland	„ 61·5	8. Western	„ 81·1

No. IV.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended 30th September*, 1864; *and* BIRTHS *and* DEATHS, *in the Quarter ended 31st December*, 1864.

COUNTRIES.	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
England and Wales	37,324,883	20,066,224	44,650	177,444	123,458
Scotland	19,639,377	3,062,294	6,639	27,132	17,151
Ireland	20,322,641	5,798,967	5,414	33,720	21,828
GREAT BRITAIN AND IRELAND	77,286,901	28,927,485	56,703	238,296	162,437

* According to the Census of 1861.

rade of United Kingdom, 1864-63-62.—*Distribution of* Exports *from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of* Imports *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Nine Months. 1864. Imports from	1864. *Exports to*	1863. Imports from	1863. *Exports to*	1862. Imports from	1862. *Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
orthern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	14,199,	4,541,	11,790,	3,731,	12,402,	3,279,
entral Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	22,497,	19,138,	18,357,	15,981,	17,709,	16,072,
Vestern Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	25,805,	11,107,	22,256,	11,975,	19,259,	11,168,
outhern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	2,627,	6,265,	3,002,	6,019,	3,481,	5,481,
evant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	19,128,	10,596,	15,882,	7,632,	11,982,	4,834,
orthern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	280,	137,	385,	145,	316,	143,
Vestern Africa	701,	403,	927,	452,	1,168,	718,
astern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	51,	69,	31,	66,	—	57,
ndian Seas, Siam, Sumatra, Java, Philippines; other Islands	619,	1,272,	1,182,	861,	813,	1,041,
outh Sea Islands	4,	62,	20,	136,	—	—
hina, including Hong Kong	11,788,	4,088,	10,956,	2,921,	8,865,	2,544,
nited States of America	13,505,	14,843,	14,669,	10,492,	18,502,	10,468,
exico and Central America	2,724,	1,498,	1,445,	1,489,	754,	559,
oreign West Indies and Hayti	5,280,	3,058,	4,151,	2,559,	3,709,	2,383,
outh America (Northern), New Granada, Venezuela, and Ecuador	1,420,	1,782,	630,	1,342,	661,	743,
,, (Pacific), Peru, Bolivia, Chili, and Patagonia	4,011,	2,172,	4,524,	1,867,	3,803,	1,220,
,, (Atlantic) Brazil, Uruguay, and Buenos Ayres	6,901,	6,782,	5,251,	4,103,	4,278,	3,869,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	42,	13,	28,	11,	50,	10,
Total.—Foreign Countries	131,5 2,	87,826,	115,486,	61,782,	107,752,	64,589,
II.—British Possessions:						
ritish India, Ceylon, and Singapore	37,612,	15,943,	30,021,	14,711,	20,599,	12,690,
ustral. Cols.—New South Wales and Victoria	5,563,	5,490,	3,834,	6,044,	4,311,	5,920,
,, ,, So. Aus., W. Aus., Tasm., and N. Zea.	2,754,	2,719,	2,039,	2,545,	1,881,	1,901,
ritish North America	4,110,	5,275,	5,229,	4,262,	5,208,	3,536,
,, W. Indies with Btsh. Guiana & Honduras	9,015,	3,038,	6,544,	2,689,	5,391,	2,289,
ape and Natal	1,185,	1,619,	1,250,	1,109,	937,	1,424,
rt. W. Co. of Af., Ascension and St. Helena	195,	200,	121,	227,	142,	299,
auritius	1,230,	490,	1,640,	340,	902,	410,
hannel Islands	612,	804,	482,	585,	494,	614,
Total.—British Possessions	62,276,	35,578,	51,160,	32,512,	39,802,	29,083,
General Total.....£	193,858,	123,404,	1 6,646	94,294,	147,554,	93,672,

Trade of United Kingdom, 1862-54.—*Computed Real Value of the Total Exports and British*

Merchandise Exported to the following Foreign Countries. [000's omitted.]	1862.	1861.	1860.	1859.
I.—Foreign Countries.	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland	2,319,	3,617,	2,889,	2,896,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland and Belgium	14,515,	13,709,	11,189,	9,279,
Western Europe; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries)	14,015,	9,555,	8,065,	5,460,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,784,	1,972,	1,415,	1,190,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	585,	278,	340,	490,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	58,	41,	43,	18,
Western Africa	262,	236,	194,	210,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	—	—	—	—
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	15,	12,	17,	21,
South Sea Islands	—	—	—	—
China, including **Hong Kong**	100,	92,	134,	129,
United States of America	4,846,	1,961,	1,241,	1,864,
Mexico and Central America	65,	73,	90,	55,
Foreign West Indies and Hayti	157,	114,	103,	108,
South America (Northern), New Granada, Venezuela and Ecuador	48,	21,	49,	62,
„ **(Pacific)**, Peru, Bolivia, Chili, and Patagonia	37,	44,	82,	74,
„ **(Atlantic)**, Brazil, Uruguay, and Buenos Ayres	154,	179,	184,	205,
Other countries (unenumerated)	26,	26,	28,	21,
Total—Foreign Countries	38,986,	31,930,	26,063,	22,082,
II.—British Possessions:				
British India, Ceylon, and Singapore	791,	692,	807,	1,004,
Austral. Cols.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zea.	903,	838,	892,	1,266,
British North America	790,	466,	259,	350,
„ W. Indies with Btsh. Guiana & Honduras	341,	219,	234,	269,
Cape and Natal	114,	117,	97,	110,
Brt. W. Co. of Af., Ascension and St. Helena	72,	62,	46,	41,
Mauritius	22,	38,	26,	15,
Ports in the Crimea	—	—	—	—
Channel Islands	145,	155,	193,	130,
Other possessions	12,	13,	13,	14,
Total—British Possessions	3,190,	2,600,	2,567,	3,199,
General Total £	42,176,	34,530,	28,630,	25,281,

Note.—These statistics of the distribution of foreign and colonial merchandize

of Foreign *and* Colonial *Produce and Manufactures to each Foreign Country Possessions.*

1858.	1857.	1856.	1855.	1854.	Merchandise Exported to the following Foreign Countries. [000's omitted.]
£	£	£	£	£	I.—Foreign Countries.
2,679,	2,276,	2,571,	643,	606,	**Northern Europe**; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland
9,125,	9,475,	9,385,	10,387,	8,840,	**Central Europe**; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium
5,011,	6,054,	4,971,	4,836,	3,639,	**Western Europe**; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries)
1,050,	933,	1,374,	982,	737,	**Southern Europe**; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta
530,	241,	380,	568,	448,	**Levant**; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt
36,	41,	31,	27,	17,	**Northern Africa**; viz., Tripoli, Tunis, Algeria, and Morocco
177,	251,	224,	220,	175,	**Western Africa**
—	—	—	—	—	**Eastern Africa**; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands
12,	14,	16,	6,	26,	**Indian Seas**, Siam, Sumatra, Java, Philippines, other Islands
—	—	—	—	—	South Sea Islands
90,	55,	71,	26,	26,	**China**, including **Hong Kong**
1,302,	1,091,	699,	745,	923,	**United States of America**
45,	55,	49,	40,	42,	Mexico and Central America
67,	98,	93,	64,	45,	Foreign West Indies and Hayti
45,	29,	36,	29,	20,	**South America (Northern)**, New Granada, Venezuela and Ecuador
57,	77,	91,	119,	66,	" **(Pacific)**, Peru, Bolivia, Chili, and Patagonia
212,	294,	237,	163,	162,	" **(Atlantic)**, Brazil, Uruguay, and Buenos Ayres
17,	25,	26,	31,	25,	Other countries (unenumerated)
20,455,	21,009,	20,254,	18,884,	15,797,	*Total—Foreign Countries*
					II.—British Possessions.
670,	583,	520,	444,	549,	British India, Ceylon, and Singapore
1,150,	1,543,	1,760,	943,	1,475,	Austral. Cols. — New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zea.
289,	339,	258,	204,	300,	British North America
233,	261,	229,	176,	206,	" W. Indies with Bh. Guiana & Honduras
109,	88,	73,	45,	63,	Cape and Natal
55,	80,	77,	75,	75,	Brt. W. Co. of Af., Ascension and St. Helena
51,	19,	17,	15,	18,	Mauritius
—	—	12,	78,	3,	Ports in the Crimea
152,	170,	181,	133,	138,	Channel Islands
10,	16,	12,	7,	12,	Other possessions
2,719,	3,099,	3,139,	2,119,	2,839,	*Total—British Possessions*
23,174,	24,108,	23,393,	21,003,	18,636,	General Total

exported from the United Kingdom, have not heretofore appeared in the *Journal*.

IMPORTS.—(United Kingdom.)—First Eleven Months (*January—November*), 1864-63-62-61-60.—*Computed Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Eleven Months.) [000's omitted.] Foreign Articles Imported.		1864.	1863.	1862.	1861.	1860.
		£	£	£	£	£
Raw Matls.—*Textile.*	Cotton Wool	66,991,	43,193,	23,598,	35,940,	31,567,
	Wool (Sheep's)..	14,629,	10,741,	10,492,	8,735,	9,727,
	Silk	11,074,	13,982,	14,243,	7,090,	7,881,
	Flax	4,843,	3,553,	4,694,	3,019,	3,377,
	Hemp	3,625,	2,916,	2,253,	1,637,	1,509,
	Indigo	2,123,	2,287,	2,360,	2,698,	2,403,
		103,285,	76,672,	57,640,	59,119,	56,464,
,, ,, *Various.*	Hides	2,521,	2,700,	2,560,	2,377,	2,801,
	Oils	2,887,	3,408,	3,204,	2,987,	3,334,
	Metals	3,917,	3,472,	3,816,	3,164,	3,442,
	Tallow	1,386,	1,819,	1,770,	2,272,	2,815,
	Timber.....	9,960,	9,846,	8,465,	9,228,	8,366,
		20,671,	21,245,	19,815,	20,028,	20,758,
,, ,, *Agricltl.*	Guano	1,116,	2,372,	1,049,	1,781,	1,183,
	Seeds	3,252,	2,751,	2,553,	2,663,	2,697,
		4,368,	5,123,	3,602,	4,444,	3,880,
Tropical,&c.,Produce.	Tea	7,541,	9,108,	7,827,	5,895,	5,932,
	Coffee	3,314,	3,586,	3,057,	2,424,	3,175,
	Sugar & Molasses	15,425,	11,636,	11,276,	12,431,	11,722,
	Tobacco	2,453,	2,293,	1,790,	1,625,	984,
	Rice.....	1,260,	1,352,	2,069,	1,697,	778,
	Fruits	835,	1,274,	1,027,	1,155,	954,
	Wines	4,684,	3,992,	3,273,	3,563,	3,883,
	Spirits	1,885,	1,563,	1,470,	1,567,	1,769,
		37,397,	34,804,	31,789,	30,357,	28,197,
Food	Grain and Meal..	18,600,	24,254,	35,063,	31,568,	27,320,
	Provisions	8,184,	7,193,	6,858,	5,958,	5,036,
		26,784,	31,447,	41,921,	37,526,	32,356,
Remainder of Enumerated Articles		4,942,	4,078,	3,499,	3,239,	3,232,
Total Enumerated Imports....		197,447,	173,369,	158,266,	154,713,	144,887,
Add for Unenumerated Imports (say)		49,361,	43,342,	39,561,	38,678,	36,222,
Total Imports.....		246,808,	216,711,	197,827,	193,391,	181,109,

EXPORTS.—(United Kingdom.)—Whole Years, 1864-63-62-61-60.—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(Whole Year.) [000's omitted.] British Produce, &c., Exported.		1864.	1863.	1862.	1861.	1860.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	45,760,	39,424,	30,569,	37,544,	42,138,
	,, Yarn.....	9,096,	8,020,	6,203,	9,293,	9,875,
	Woollen Manufactures	18,566,	15,519,	13,117,	11,141,	12,164,
	,, Yarn	5,422,	5,065,	3,854,	3,546,	3,844,
	Silk Manufactures ...	2,018,	1,959,	2,015,	2,036,	2,106,
	,, Yarn.....	297,	270,	346,	276,	295,
	Linen Manufactures....	8,158,	6,510,	5,131,	3,859,	4,802,
	,, Yarn.....	3,010,	2,536,	1,852,	1,616,	1,801,
		92,327,	79,303,	63,117,	69,311,	77,025,
,, *Sewed.*	Apparel	2,584,	2,808,	2,556.	2,154,	2,157,
	Haberdy. and Millnry.	4,787,	4,362,	3,592,	3,423,	4,011,
		7,371,	7,170,	6,148,	5,577,	6,168,
Metals	Hardware.....	4,159,	3,827,	3,346,	3,425,	3,772,
	Machinery	4,854,	4,365,	4,097,	4,220,	3,825,
	Iron	13,214,	13,111,	11,302,	10,342,	12,158,
	Copper and Brass.....	3,911,	4,233,	2,823,	2,313,	3,002,
	Lead and Tin	2,786,	2,863,	2,729,	1,822,	2,562,
	Coals and Culm	4,162,	3,708,	3,750,	3,593,	3,322,
		33,086,	32,107,	28,047,	25,715.	28,641,
Ceramic Manufcts.	Earthenware and Glass	2,179,	2,090,	1,863,	1,660,	2,094,
Indigenous Mnfrs.	Beer and Ale	1,823,	1,777,	1,594,	1,417,	1,864,
	Butter	328,	472,	379,	484,	633,
	Cheese	148,	156,	127,	131,	119,
	Candles	142,	190,	226,	279,	239,
	Salt	281,	287,	321,	370,	358,
	Spirits	503,	454,	511,	484,	287,
	Soda.....	917,	868,	886,	604,	963,
		4,142,	4,204,	4,044,	3,769,	4,463,
Various Manufcts.	Books, Printed.....	466,	457,	416,	445,	495,
	Furniture	259,	302,	276,	264,	222,
	Leather Manufactures	2,404,	2,318,	2,565,	2,197,	2,129,
	Soap	231,	256,	227,	230,	250,
	Plate and Watches	427,	463,	505,	449,	564,
	Stationery..... ..	354,	345,	286,	649,	750,
		4,141,	4,141,	4,275,	4,234,	4,410,
Remainder of Enumerated Articles		9,648,	8,669,	8,839,	4,556,	3,966,
Unenumerated Articles		7,542,	8,805,	7,805,	10,293,	9,076,
Total Exports		160,436,	146,489,	124,138,	125,115,	135,843,

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—Years, 1864-63-62-61.—
Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.

(Whole Year.)	1864.			1863.		1862.		1861.	
ENTERED:—	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
Vessels belonging to—	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	683	237,	347	423	137,	436	135,	407	125,
Sweden	1,233	201,	163	1,043	172,	963	162,	945	156,
Norway	3,987	869,	218	3,360	755,	3,121	657,	2,917	634,
Denmark	2,731	271,	99	2,871	278,	2,634	257,	2,321	226,
Prussia and Ger. Sts.	2,379	600,	252	3,881	942,	3,857	929,	3,457	809,
Holland and Belgium	1,849	262,	142	1,702	242,	1,778	247,	1,546	215,
France	2,523	203,	80	2,884	238,	2,336	197,	1,686	136,
Spain and Portugal	430	130,	302	364	112,	375	115,	436	106,
Italy & other Eupn. Sts.	885	254,	288	919	266,	928	267,	863	239,
United States	429	457,	1,065	681	692,	1,327	1,179,	1,932	1,67 ,
All other States	17	6,	353	12	4,	15	5,	19	7,
United Kingdm. & Depds.	17,146 24,962	3,490, 7,812,	204 313	18,140 23,773	3,838, 7,299,	17,770 22,356	4,150, 6,590,	16,529 21,060	4,300, 6,304,
Totals Entered	42,108	11,302,	266	41,913	11,137,	40,126	10,740,	37,589	10,604,
CLEARED:—									
Russia	600	220,	366	420	131,	417	127,	413	123,
Sweden	1,161	186,	160	1,039	167,	981	163,	1,041	168,
Norway	2,398	433,	181	1,860	333,	1,974	333,	1,903	312,
Denmark	2,924	289,	95	3,272	321,	3,153	309,	3,285	323,
Prussia and Ger. Sts.	3,422	730,	213	5,548	1,132,	5,480	1,072,	5,207	990,
Holland and Belgium	1,831	287,	157	1,888	292,	2,195	331,	1,932	278,
France	4,547	454,	100	4,602	450,	5,070	492,	5,135	496,
Spain and Portugal	436	136,	312	390	124,	380	121,	398	107,
Italy & other Eupn. Sts.	1,242	374,	301	1,106	330,	1,039	297,	1,098	304,
United States	434	459,	1,058	627	648,	1,172	1,052,	1,580	1,369,
All other States	31	11,	355	21	6,	32	12,	23	7,
United Kingdm. & Depds.	19,026 28,229	3,579, 8,590,	188 304	20,773 27,624	3,934, 7,952,	21,893 27,066	4,309, 7,400,	22,015 26,454	4,477, 6,841,
Totals Cleared	47,255	12,169,	258	48,397	11,886,	48,959	11,709,	48,469	11,318,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — *Computed Real Value for the* Whole Years, 1864-63-62.

[000's omitted.]

(Whole Year.)	1864.		1863.		1862.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	2,657,	—	5,995,	—	6,075,	—
So. Amca. and W. Indies	5,240,	7,002,	3,897,	6,651,	1,631,	6,242,
United States and Cal.	7,480,	155,	7,321,	627,	9,732,	333,
	15,377,	7,157,	17,413,	7,278,	18,068,	6,575,
France	574,	1,115,	187,	1,257,	92,	2,203,
Hanse Towns, Holl. & Belg.	220,	2,271,	316,	2,062,	430,	2,707,
Prtgl., Spain, and Gbrltr.	133,	93,	16,	90,	25,	120,
Mlta., Trky., and Egypt	81,	1,	115,	4,	8,	13,
China	—	—	—	—	—	—
West Coast of Africa	96,	24,	70,	8,	100,	6,
All other Countries	420,	166,	1,025,	189,	1,179,	128,
Totals Imported	16,901,	10,827,	19,142,	10,888,	9,902,	11,752,
Exported to:—						
France	7,775,	2,146,	3,503,	1,258,	6,356,	849,
Hanse Towns, Holl. & Belg.	82,	1,001,	1,104,	791,	348,	655,
Prtgl., Spain, and Gbrltr.	1,590,	29,	1,745,	5,	2,466,	8,
	9,447,	3,176,	6,352,	2,054,	9,170,	1,512,
Ind. and China (viâ Egypt)	2,060,	6,308,	3,474,	8,815,	1,920	10,710,
Danish West Indies	—	—	—	—	—	—
United States	185,	5,	40,	14,	37,	1,
South Africa	208,	—	159,	7,	—	—
Mauritius	—	—	—	—	—	—
Brazil	927,	143,	1,681,	50,	409,	44,
All other Countries	453,	245,	3,597,	300,	4,476,	1,047,
Totals Exported	13,280,	9,877,	15,303,	11,240,	16,012,	13,314,
Excess of *Imports*	3,621,	950,	3,839,	—	3,890,	—
,, Exports	—	—	—	648,	—	1,562,

REVENUE.—(UNITED KINGDOM.)—31ST DEC., 1864-63-62-61.

Net Produce in YEARS *and* QUARTERS *ended* 31ST DEC., 1864-63-62-61.

[000's omitted.]

QUARTERS, ended 31st Dec.	1864.	1863.	1864.		Corresponding Quarters.	
			Less.	More.	1862.	1861.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	5,932,	5,970,	38,	—	6,320,	6,147,
Excise	5,000,	4,753,	—	,247,	4,000,	3,896,
Stamps	2,223,	2,293,	70,	—	2,187,	2,098,
Taxes	1,294,	1,285,	—	9,	1,270,	1,282,
Post Office	1,090,	990,	—	,100,	950,	910,
	15,539,	15,291,	,108,	,356,	14,727,	14,333,
Property Tax	1,580,	2,132,	,552,	—	2,931,	2,359,
	17,119,	17,423,	,660,	,356,	17,658,	16,692,
Crown Lands	88,	87,	—	1,	86,	84,
Miscellaneous	863,	808,	—	55,	634,	292,
Totals	18,070,	18,318,	,660,	,412,	18,378,	17,068,
			NET DECR. £248,000			

YEARS, ended 31st Dec.	1864.	1863.	1864.		Corresponding Years.	
			Less.	More.	1862.	1861.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	22,535,	23,421,	,886,	—	24,036,	23,774,
Excise	19,343,	17,745,	—	1,598,	17,534,	18,161,
Stamps	9,468,	9,252,	—	,216,	8,914,	8,488,
Taxes	3,261,	3,208,	—	53,	3,148,	3,119,
Post Office	4,060,	3,800,	—	,260,	3,600,	3,500,
	58,667,	57,426,	,886,	2,127,	57,232,	57,042,
Property Tax	7,999,	9,806,	1,807,	—	11,104,	9,962,
	66,666,	67,232,	2,693,	2,127,	68,336,	67,004,
Crown Lands	307,	302,	—	5,	298,	294,
Miscellaneous	3,152,	2,899,	—	,253,	2,362,	1,306,
Totals	70,125,	70,433,	2,693,	2,385,	70,996,	68,604,
			NET DECR. £308,000			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST DEC., 1864:—

APPLICATION.

An Account showing the REVENUE *and other* RECEIPTS *of the* QUARTER *ended 31st December,* 1864; *the* APPLICATION *of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.*

Received:—

	£
Surplus Balance beyond the Charge of the *Consolidated Fund* for the Quarter ended 30th September, 1864, viz.:—	
Great Britain ..... —	
Ireland £407,349	
	407,349
Income received in the Quarter ended 31st December, 1864, as shown on preceding page	18,069,596
Amount raised per Act 26 and 27 Victoria, cap. 80, on account of Fortifications, &c.	115,000
Amount raised by the issue of Exchequer Bonds, per Act 27 and 28 Victoria, cap. 74	700,000
Amount received in the Quarter ended 31st December, 1864, in repayment of Advances for Public Works, &c.	495,182
Saving on former charge for the Civil List	90
	£19,787,217
Balance, being the Deficiency on 31st December, 1864, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other charges payable in the Quarter to 31st March, 1865, and for which Exchequer Bills (Deficiency) will be issued in that Quarter	1,951,840
	£21,739,057

Paid:—

	£
Amount applied out of the Income for the Quarter ended 31st December, 1864, in Redemption of Exchequer Deficiency Bills, for the Quarter ended 30th September, 1864, viz.:—	
Total Deficiency £2,695,919	
Deduct—Redeemed by Sinking Fund 612,471	
	2,083,448
Amount applied out of the Income to *Supply Services* in the Quarter ended 31st December, 1864	9,788,825
Charge of the *Consolidated Fund* for the Quarter ended 31st December, 1864, viz.:—	
Interest of the Permanent Debt £6,288,496	
Terminable Debt 324,065	
Principal of Exchequer Bills 377,500	
Interest of „ „ 70,573	
„ Deficiency „ ..... —	
The Civil List 101,337	
Other Charges on Consolidated Fund 580,119	
Advances for Public Works, &c. 479,396	
Sinking Fund 646,892	
	8,868,378
Surplus Balance in Ireland beyond the Charge of the Consolidated Fund in Ireland for the Quarter ended 31st December, 1864	998,406
	£21,739,057

CORN.—*Gazette Average Prices* (England and Wales), *Fourth Quarter of* 1864.

[This Table is communicated by H. F. Jadis, Esq., Comptroller of Corn Returns.]

Weeks ended on a Saturday 1864.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
October 1	39 8	– –	30 11	20 7	35 4	37 1
„ 8	38 9	30 2	20 –	30 11	38 11	35 8
„ 15	38 1	29 11	20 1	33 9	39 3	35 4
„ 22	38 6	30 2	20 –	29 1	38 2	35 5
„ 29	38 9	30 2	20 1	30 9	38 –	35 –
Average for October ..	38 9	30 3	20 2	31 11	38 11	35 8
November 5	38 11	30 3	20 2	29 9	37 9	35 5
„ 12	38 9	30 1	19 11	33 –	37 11	35 9
„ 19	38 9	29 9	19 5	29 9	37 9	34 11
„ 26	38 8	29 3	20 –	40 –	37 10	35 1
Average for November..	38 9	29 10	19 10	33 1	37 10	35 3
December 3	38 5	29 2	20 3	26 8	37 10	35 5
„ 10	38 4	28 8	19 10	26 7	37 2	34 11
„ 17	38 1	28 4	19 9	29 1	37 2	35 3
„ 24	37 10	28 –	19 1	30 4	36 3	35 6
„ 31	37 10	27 11	18 10	—	36 8	34 7
Average for December ..	38 1	28 5	19 6	28 2	37 –	35 1
Average for the Quarter ..	38 5	29 4	19 9	30 9	37 8	35 3

RAILWAYS.—Prices, *Oct.—Dec.;—and* Traffic, *Jan.—Dec.*, 1864.

Total Capital Expended Mlns.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic first 52 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 52 Weeks.		Dividends per Cent. for Half Years.		
		1st Dec.	1st Nov.	1st Oct.	'64.	'63.	'64.	'63.	'64.	'63.	30 Jun. '64.	31 Dec. '64.	30 Jun. '63.
£					No.	No.	£	£	£	£	*s. d.*	*s. d.*	*s. d.*
51,0	Lond. & N.Westn.	117¾	117	108¼	1,273	1,232	5,413,	4,966,	92	82	57 6	60 –	42 6
45,0	Great Western	78¼	76½	66¼	1,225	1,169	3,382,	3,157,	59	56	30 –	30 –	20 –
16,3	„ Northern....	134	134	126½	387	353	1,746,	1,546,	98	87	55 –	87 6	42 6
21,7	„ Eastern	48½	46⅛	43⅝	663	663	1,648,	1,540,	53	50	12 6	25 –	12 6
12,2	Brighton	106	104	103	267	261	1,009,	976,	75	76	50 –	50 –	50 –
17,2	South-Eastern	86¾	85¾	81¼	308	306	1,191,	1,135,	82	74	42 6	58 4	45 –
14,9	„ Western	99	97	92½	463	454	1,204,	1,143,	50	46	45 –	55 –	45 –
178,3		95¾	94¼	89	4,586	4,438	15,593,	14,463,	73	67	41 9	52 3	36 9
23,8	Midland.....	136¾	135	126¼	651	641	2,413,	2,178,	77	71	70 –	70 –	57 6
20,1	Lancsh. and York.	115¼	116	111½	403	402	2,004,	1,813,	99	93	57 6	47 6	42 6
13,1	Sheffield and Man.	67½	66½	62½	242	242	912,	828,	75	68	27 6	15 –	—
31,4	North-Eastern	115	110½	105½	1,095	1,095	3,086,	2,777,	55	48	55 –	55 –	42 6
88,4		108½	107	101¼	2,391	2,380	8,415,	7,596,	76	70	52 6	46 10	47 6
10,2	Caledonian	133	128½	121	281	244	984,	890,	75	76	65 –	62 6	52 6
5,7	Gt. S. & Wn. Irlnd.	93	94	92	387	373	434,	426,	21	22	45 –	45 –	42 6
282,6	*Gen. aver.*	102⅝	100¾	95½	7,645	7,435	25,426,	23,375,	70	65	47 1	50 10	41 3

Consols.—Money Prices, 1*st Dec.*, 90⅜ to ½ de.—1*st Nov.*, 89⅜ to ½ de.—1*st Oct.*, 87¾ to ⅞ de.
Exchequer Bills.—1*st Dec.*, 5*s.* dis. to par.—1*st Nov.* (June), 14*s.* to 9*s.* dis., and (March) 7*s.* to 2*s.* dis.

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the Fourth Quarter (*Oct.—Dec.*) *of* 1864.

[0,000's omitted.]

1	2	3	4	5	6	7
Issue Department.					Collateral Columns.	
Liabilities.	Dates.	Assets.				
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1864.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1864. Per ann.
26,93	Oct. 5	11,01	3,63	12,27	20,36	
26,92	,, 12	11,01	3,63	12,27	21,22	9 Sep. 9 p. ct.
26,88	,, 19	11,01	3,63	12,23	21,23	
27,07	,, 26	11,01	3,63	12,41	20,97	
27,22	Nov. 2	11,01	3,63	12,57	21,04	
27,57	,, 9	11,01	3,63	12,92	20,39	11 Nov. 7½ ,,
27,77	,, 16	11,01	3,63	13,12	20,20	
28,05	,, 23	11,01	3,63	13,40	19,55	25 ,, 7 ,,
27,85	,, 30	11,01	3,63	13,20	19,82	
27,74	Dec. 7	11,01	3,63	13,09	19,64	
28,00	,, 14	11,01	3,63	13,35	19,18	16 Dec. 6 ,,
28,17	,, 21	11,01	3,63	13,52	19,21	
28,04	,, 28	11,01	3,63	13,39	19,38	

Banking Department.

8	9	10	11	12	13	14	15	16	17	1
Liabilities.					Dates.	Assets.				
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		Totals of Liabilities and Assets.
Capital.	Rest.	Public.	Private.		(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1864.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	4,00	6,88	11,73	,56	Oct. 5	10,60	20,84	6,57	,72	37,73
14,55	3,19	7,02	13,21	,56	,, 12	10,17	21,92	5,70	,74	38,53
14,55	3,25	3,27	14,10	,60	,, 19	9,57	19,78	5,65	,77	35,77
14,55	3,27	3,72	13,90	,57	,, 26	9,41	19,77	6,10	,74	36,01
14,55	3,27	3,78	13,85	,55	Nov. 2	9,38	19,70	6,18	,74	36,00
14,55	3,30	4,56	14,44	,53	,, 9	9,97	19,51	7,18	,72	37,39
14,55	3,31	5,14	14,43	,57	,, 16	10,37	19,30	7,57	,74	37,99
14,55	3,32	5,52	14,36	,55	,, 23	10,37	18,71	8,50	,73	38,30
14,55	3,29	6,30	13,27	,51	,, 30	10,47	18,63	8,03	,78	37,92
14,55	3,31	6,47	12,67	,47	Dec. 7	10,47	18,15	8,10	,75	37,48
14,55	3,32	7,16	12,27	,49	,, 14	10,47	17,73	8,82	,77	37,80
14,55	3,34	7,69	12,93	,45	,, 21	10,47	18,75	8,96	,78	38,97
14,55	3,36	8,60	13,04	,44	,, 28	10,82	19,79	8,66	,71	39,99

CIRCULATION.—Country Banks.

Average Amount of Promissory Notes in Circulation in England *and* Wales *on Saturday, in each Week during the* Fourth Quarter (*Oct.—Dec.*) *of* 1864; *and in* Scotland *and* Ireland, *at the Three Dates, as under.*

England and Wales.				Scotland.				Ireland.		
Dates.	Private Banks. (Fixed Issues, 4,21.)	Joint Stock Banks. (Fixed Issues, 3,23.)	Total. (Fixed Issues, 7,44.)	Three Weeks, ended	£5 and upwards.	Under £5.	Total. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	Total. (Fixed Issues, 6,35.)
1864.	£ Mlns.	£ Mlns.	£ Mlns.	1864.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns
Oct. 22	3,24	2,90	6,15							
,, 29	3,23	2,86	6,08							
Nov. 5	3,21	2,84	6,06							
,, 12	3,16	2,82	5,98	Nov. 12	1,58	2,86	4,44	2,92	3,04	5,96
,, 19	3,11	2,78	5,89							
,, 26	3,08	2,77	5,85							
Dec. 3	3,04	2,75	5,79	Dec. 10	1,61	3,02	4,63	2,81	3,06	5,87
,, 10	2,99	2,72	5,71							
,, 17	2,94	2,69	5,63							
,, 24	2,93	2,67	5,60							
,, 31	2,93	2,86	5,79							

FOREIGN EXCHANGES.—*Quotations as under,* London *on Paris, Hamburg & Calcutta; —and New York, Calcutta, Hong Kong & Sydney, on* London—*with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Paris.				Hamburg.				Calcutta.				
Dates.	London on Paris.	Bullion as arbitrated.		Prem. or Dis. on Gold per mille.	London on Hambg.	Bullion as arbitrated.		New York.	India Council	At Calcutta on London.	Hong Kong.	Sydney.	Standard *Silver* in bars in London.
	3 m. d.	Agnst. Engd.	For Engd.		3 m. d.	Agnst. Engd.	For Engd.	60 d. s.	60 d. s.	6 m. d.	6 m. s.	30 d. s.	pr. oz.
1864.		pr. ct.	pr. ct.			pr. ct.	pr. ct.	pr. ct.	*d.*	*d.*	*d.*	pr. ct.	*d.*
Oct. 1 ..	25·80	—	·3	3 pm	13·10	—	·4	248½	*24	25 5/8	57½	par. 1 pm	61 3/8
,, 15 ..	·87½	—	·2	,,	,, ½	—	·7	230	*23 3/4	,, 7/8	,,	,,	,, 1/4
Nov. 5 ..	·72½	—	—	,,	,, ¼	—	—	227	*,, 3/8	,, 3/4	,, 3/4	,,	60 7/8
,, 19 ..	·67½	·1	—	,,	·9½	—	—	267	*,,	,, 1/8	58¼	,,	61
Dec. 3 ..	·60	·2	—	,,	·8½	—	·3	261	*,, 3/4	,, 1/4	58	,,	,, 5/8
,, 17 ..	·57½	·2	—	,,	·8	·1	—	252	*,, 7/8	,, ½	57½		,,

Note—The figures marked thus * are for bankers' drafts.

JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1865.

REPORT *of the* COUNCIL *for the* FINANCIAL YEAR *ended* 31*st December*, 1864, *and for the* SESSIONAL YEAR *ended* 15*th March*, 1865, *presented at the* THIRTY-FIRST ANNIVERSARY MEETING *of the* STATISTICAL SOCIETY, *held at the Society's Rooms*, 12, *St. James' Square, on Wednesday*, 15*th March*, 1865; *with the* PROCEEDINGS *of that Meeting.*

COLONEL SYKES, M.P., *President, in the Chair.*

THE Council of the Statistical Society have much pleasure in laying before the meeting the report of the proceedings of the Society for the *thirty-first* sessional year. From the following statement which shows the present number of Fellows and the corresponding numbers for the previous year, it appears that the—

	1864-65.	1863-64.
Number of Fellows on the list in March was	358	357
Life Members included in that number	64	63
Members lost during the year by death, withdrawal or default	35	27
New Members elected	40	16

The Income and the Surplus of Assets for the years ended with December, were in the—

	Past Year.	Previous Year.
	£	£
Balance at the beginning of the year	330	233
Receipts from all sources during the year	748	766
Cash balance at the end of the year	175	330
Surplus of assets ,,	1,787	1,767

During the past year the Council bought, in the names of the Trustees, the sum of 101*l.* 7*s.* 8*d.* in Consols. This purchase, added to the sum already invested, raises the nominal value of

Government securities held for the benefit of the Society to 1,000*l.* stock.

Thirteen papers were read at the ordinary meetings of the Society, from March, 1864, to February, 1865, inclusively. The meetings neither flagged in numbers nor in interest, and the Council have experienced no difficulty in bringing before the Fellows topics sufficiently varied and sufficiently important to engage their attention. This will be evident upon a perusal of the subjoined list :—

March, 1864.—*Mr. Henry Jeula.*—On some Statistics relating to Shipping Casualties.

„ „ *Mr. William B. Hodge.*—On Shipwrecks in the Royal Navy.

April, „ *James Heywood, M.A., F.R.S.*—On the Resources of Brazil.

May, „ *Mr. P. M. Tait.*—On the Mortality of the Eurasians.

William G. Lumley, LL.M.—On the Statistics of Roman Catholics in England.

June, „ *James Valentine.*—On the Statistics of Aberdeen.

Mr. James Michell.—On the Statistics of Crime in Russia.

Nov., „ *Professor Levi.*—Report of the Proceedings of Section F of the British Association at Bath.

Mr. Edward T. Blakely.—On the Commercial Progress of the Colonies, 1858 to 1863.

Dec., „ *James Heywood, M.A., F.R.S.*—On the Extension of Modern Subjects as a part of Regular Study in Educational Institutions.

Jan., 1865.—*Mr. William L. Sargant.*—On the Inconsistencies of the English Census of 1861 with the Reports of the Registrar-General.

Feb., „ *Dr. Wm. Farr.*—On Infant Mortality, and on Alleged Inaccuracies of the Census.

Mr. E. Y. Robbins.—On the Prevalence of Phthisis in America, especially amongst Females.

The field of statistical research is one of immense extent, some parts of which have been much more fully investigated than others. It may serve to show in what directions the labours of the Society have of late been principally conducted, if the Council take this opportunity of exhibiting succinctly that portion of the work which has been confined to the reading of Papers at the ordinary meetings, and which have subsequently been published in the *Journal* during *the last ten years.* At the same time this list may serve to indicate some interesting subjects of inquiry which have not been completely

investigated, or have not yet been attempted. The subjects which have engaged the attention of the Fellows in that period may be conveniently, if not very scientifically, classed under eight heads, namely:—(*a*) Commercial Statistics; (*b*) Industrial Statistics; (*c*) Financial Statistics; (*d*) Moral and Social Statistics; (*e*) Political Statistics; (*f*) Vital Statistics; and (*g*) Miscellaneous Statistics.

a. Commercial Statistics.

Orders in Council on English, Russian, and Neutral Commerce	A. Waddilove	1855
Mining Resources of France, 1841-52	H. R. Lack	,,
Statistics of the Clearing House	C. Babbage	,,
External Commerce of British India	Colonel Sykes	,,
Mining Industries of the United Kingdom	Robert Hunt	1856
The Progress of Fire Insurance in Great Britain	S. Brown	,,
Metropolitan Railway Terminal Accommodation	W. A. Wilkinson	1858
Effects of the Gold Supplies on Foreign Exchanges	F. Jourdan	1861
Statistics of Tonnage under the Navigation Law of 1849	J. Glover	1862
On the Cotton Trade, as affected by the American War	Dr. L. Levi	1863
Industrial Progress of Victoria, as connected with its Gold Mining	H. J. Chapman	,,
Commercial Resources of Central British America	Professor Hind	1864
Shipwrecks in the Mercantile Navy	H. Jeula	,,
Resources of Brazil	J. Heywood	,,

b. Industrial Statistics.

Rates of Wages in Manchester and Salford	D. Chadwick	1859
Earnings of Agricultural Labourers in England and Wales	F. Purdy	1861
Country Dwellings for Town Labourers	J. T. Danson	1859
Serfdom in Russia	A. de Buschen	1861
Earnings of Agricultural Labourers in Scotland and Ireland	F. Purdy	1862
Pay and Income of the British Soldier, as Compared with the Rate of Agricultural Wages	Major-Gen. Tulloch	1863

c. Financial Statistics.

On the Loans Raised by Mr. Pitt during the French War	Wm. Newmarch	1855
Ten Years' Retrospect of London Banking	F. W. Gilbart	,,
The Constitution and Operations of the Bank of England	C. Jellicoe	1856
British Government Life Annuities, 1808-55	F. Hendriks	,,
The Banking Establishments of Belgium	W. G. Lumley	,,
On the Pay of the Ministers of the Crown	William Farr	1857
Statistics of the British Land Tax Assessment	F. Hendriks	,,
Indian Revenue and Taxation	,,	1858
On the Distribution and Productiveness of Taxation in the United Kingdom	Dr. L. Levi	1860
Progress of the Expenditure of the United Kingdom	,,	1861
Taxes on Enjoyments	M. de Parieu	,,

e. Financial Statistics—*Contd.*

Fallacy of the Warburton Argument for an Indiscriminating Income Tax	W. L. Sargant	1861
On the National Debt of Great Britain and of other Countries	Dr. L. Levi	1862
Finance and Taxation of the United States. Part I	C. Walford	1863
,, ,, ,, II	,,	,,

d. Moral and Social Statistics.

Statistical Position of Religious Bodies in England and Wales	H. Mann	1854
Pauperism and Crime in the United States	Rev. Robert Everest	,,
Nature and Extent of the Benefits conferred by Hospitals on the Working Classes and the Poor	W. A. Guy	1855
Distribution of European Emigrants over the United States	Rev. Robert Everest	,,
The Relations between Crime, Popular Instruction, &c.	Rev. J. Clay	1856
The Relative Criminality of Natives and Foreigners in Europe and America	Rev. Robert Everest	1857
Administration of the Poor Rates in the Metropolis	W. G. Lumley	1858
Statistics of Russian Universities	A. Koolomzine	1859
Bastardy in certain London Parishes	W. Acton	,,
Statistics of the English Poor Rate, 1776-1859	F. Purdy	1860
On the Criminal Returns of England and Wales, and on Reformatories	T. B. L. Baker	,,
Resources of Popular Education in England and and Wales	H. Mann	1862
On Prison Statistics in Lower Bengal	Dr. Mouat	1862
On the Statistics of Illegitimacy	W. G. Lumley	,,
Statistics of Roman Catholics in England and Wales	,,	1864
Statistics of Crime in Russia	T. Michell	,

Political Statistics.

The Electoral Statistics of England and Wales. Part I, 1832-57	W. Newmarch	1857
The Electoral Statistics of England and Wales. Part II	,,	1859
New Statistical Method for Ascertaining the Votes of Majorities	T. Hare	1860
Expenditure of the United Kingdom for Colonial Purposes	F. Purdy	1863

f. Vital Statistics.

Mortality arising from Naval Operations	W. B. Hodge	1855
,, Military ,,	,,	1856
The Longevity of Lawyers	W. A. Guy	1857
The Population and the Births and the Deaths in Great Britain and France Compared	G. M. Willich	1858
Vital Statistics of the Society of Friends	J. J. Fox	,,
On a Standard of Public Health for England	Dr. Greenhow	1859
Duration of Life as affected by the Pursuits of Literature, Science, and Art	W. A. Guy	
Vital Statistics of Prussia	Sir F. H. Goldsmid	,,

f. Vital Statistics—*Contd.*

On the Maori Population of New Zealand	F. D. Fenton	1860
On the Growth of the Human Body in Height and Weight, from 18—30 Years of Age	J. T. Danson	1861
Vital Statistics of Sweden	F. Hendriks	1862
On the Mortality of Eurasians	P. M. Tait	1864

g. Miscellaneous Statistics.

Annual Fluctuations in Deaths and in Crime	W. A. Guy	1857
On the Public Works of India	Colonel Sykes	1858
List of Prices of various Articles of Snaith in the sixteenth, seventeenth, and eighteenth centuries	Rev. C. B. Robinson	,,
Different Principles of Legislation and Administration in Europe	E. Chadwick	1859
A Review of the Statistics of Spain	F. Hendriks	1860
Numerical Analysis of Patients treated in Guy's Hospital	Dr. Steele	1861
The Inclosure Commission, its Powers, &c.	W. Tottie	1862
The Rationale and Working of the Patent Laws	Prof. J. E. T. Rogers	1863
On Sufficient and Insufficient Dietaries	W. A. Guy	,,
On the Official Statistics of the Netherlands	Von Baumhauer	,,
On a Continuous Price of Wheat for 105 Years, 1380-1484	Prof. J. E. T. Rogers	,,
On Certain Results and Defects in the Reports of the Registrar-General	W. L. Sargant	1864
Shipwrecks in the Royal Navy	W. B. Hodge	1864
Price of Edibles and Potables in 1506	Colonel Sykes	1863
Statistics of the City of Aberdeen	J. Valentine	1864

It must not, however, be imagined that the Papers printed in the *Journal* are restricted to those read in these rooms, and which may be properly called the Transactions of the Society. The pages of that work are enriched by many valuable Papers read before the Section of the British Association, devoted to the study of Economic Science and Statistics, and by periodical collections of interesting statistical tables and information.

It may be interesting to the Fellows to know that the *Journal* of the Society is widely circulated abroad by the copies distributed to the Foreign Honorary Members; and that it is, as the Council believes, permanently deposited in the following Public Institutions of this and other countries:—

England.

London—
- British Museum
- Institute of Actuaries
- ,, of Civil Engineers
- King's College
- London Library
- ,, Institution
- Museum of Practical Geology
- Royal Agricultural Society
- ,, Asiatic Society
- ,, Geographical Society
- ,, Horticultural Society
- ,, Institution
- ,, Medical and Chirurgical Society
- Society of Arts
- University College

ENGLAND—*Contd.*

Oxford—
The Bodleian Library

Cambridge—
The King's Library

Liverpool—
Historic Society of Lancashire and Cheshire
Literary and Philosophical Society

Manchester—
Literary and Philosophical Society
Statistical Society.

SCOTLAND.

Edinburgh—
The Advocates' Library
The Faculty of Actuaries
General Register Office
Royal Society.

IRELAND.

Dublin—
Royal Society
Statistical Society
University

Belfast—
Linen Trade Committee

Cork—
Royal Cork Institution.

AUSTRALIA.

Adelaide—
South Australian Government
" Institute

Hobart Town—
Royal Society of Tasmania

Melbourne—
Royal Society of Victoria.

NEW ZEALAND.

Auckland—Government of New Zealand.

INDIA.

Bengal—Royal Asiatic Society.

AMERICA.

Boston—
American Statistical Association

New York—
American Geographical and Statistical Society
Astor Library
State Library

New Orleans—
Academy of Sciences

Philadelphia—
Franklin Institute

Washington—
Smithsonian Institution
United States' Patent Office
" National Observatory
Academy of Arts and Sciences.

FRANCE.

Paris—
Bureau de la Statistique Générale
Statistical Society of Paris

GERMANY.

Frankfort—
Geographical and Statistical Society

Gotha—
Public Library.

SWEDEN.

Stockholm—Royal Swedish Registration Commission.

Since the last Anniversary Meeting the Council has caused the Catalogue of the Library to be made up to the end of 1864. This record, which is kept upon the principle of entering each work, both under the name of the author and of the subject, now contains a classified account of more than *three thousand volumes*, principally upon statistical and economical subjects relating to the British Empire and her dependencies, and to Foreign Countries.

The balance of the subscription to the "Tooke Memorial "Fund," amounting to 25*l.* 14*s.* 6*d.*, to which the Council added 10*l.*, has been assigned to the purchase of works upon Political Economy. The Council have accordingly expended 25*l.* in books, which have been placed in the library, for circulation or for reference.

At the same time the Council invited the Fellows to contribute to the Memorial by the donation of appropriate books; an invitation which has been already responded to by several Fellows. The subjoined list will show that the Council have procured several recognized text-books of the science, and standard works of reference, both by British and Foreign authors.

WORKS IN ENGLISH

Babbage, Charles.—Economy of Manufactures and Machinery.
Bailey, S.—Money and its Vicissitudes in Value.*
Blakey, R.—The History of Political Literature from the Earliest Times. 2 vols.
Bullion Tracts. 3 vols.
Cairn, J. E., M.A.—The Slave Power; its Career, Character, and Probable Designs.
Chalmers.—Political Economy.
Fawcett.—Manual of Political Economy.
Gladstone.—Financial Policy.
Göschen.—On the Theory of the Foreign Exchanges.
Hill, E.—The Principles of Currency.*
Jones.—Political Economy. By Whewell.
Jones.—On Rent.
Lees.—On the Drain of Silver to the East.
McCulloch.—Principles of Political Economy.
Malthus.—Political Economy.
Merivale, H.—On Colonisation.
Mill, James.—Elements of Political Economy.*
Mill, John S.—Political Economy. 2 vols.
Northcote, Sir Stafford.—Twenty Years of Financial Policy.
Page, F.—The Principles of the English Poor Law.*
Ricardo, David.—The Works of. By J. McCulloch.
Sargant, W. L.—Economy of the Labouring Classes.*
" Robert Owen and his Philosophy.*
" Social Innovators and their Schemes.
" The Science of Social Opulence.*
Senior.—Political Economy.
Smith, Adam.—Wealth of Nations. 3 vols. 9th edition.*

* The works marked * are donations.

Stewart, Dugald.—Lectures on Political Economy. By Sir W. Hamilton. 2 vols.

Stirling, P. J.—The Philosophy of Trade.

Torrens, W. T. M.—Lancashire's Lesson; or, the need of a Settled Policy in times of Exceptional Distress.*

Violet, T.—The Advancement of Merchandise.*

Wayland, F.—Elements of Political Economy.

WORKS IN FRENCH.

Bastiat, F.—Œuvres completes de. 6 vols.

Bigelow, J.—Les Etats-Unis d'Amérique en 1863. 2 vols.

Blanqui.—Histoire de l'Economie Politique. 2 vols.

„ Précis Elémentaire d'Economie Politique.

Cribario.—Economie Politique. 2 vols.

—Dictionnaire Universale du Commerce et Navigation. 2 vols.

—Dictionnaire d'Economie Politique. 2 vols.

Ducpetiaux, E.—Des Progrès et de l'état actuel de la Réforme Pénitentiare. 3 vols.

Guyard.—Pauperiséme en France.

Kemmeter.—Economie Nationale.

Lavergne.—Economie Rurale de la France et de l'Angleterre. 2 vols.

Levasseur.—Système de Law.

Messance.—Recherches sur la Population des généralités d'Auvergne, de Lyon, et de Rouen.

Monnier.—Histoire de l'Assistance.*

Quesnay.—Physiocrates. 2 vols.

Rossi.—Cours d'Economie Politique. 4 vols.

Say, V. B.—Economie Politique.

Sismondi.—Etudes sur l'Economie Politique. 2 vols.

Tugot.—Les Œuvres de. Par Daire. 2 vols.

Wolowski.—Roschers Principes d'Economie Politique.

„ La Question des Banques.*

„ Les Finances de la Runie.

The British Association held its thirty-fourth Meeting at Bath, in September last. Our *Treasurer*, Dr. William Farr, presided over the Section of "Economic Science and Statistics." The Section was fully occupied during the term allotted to its transactions by many interesting and suggestive papers, several of which were written by Fellows of this Society. Some of those contributions, and Dr. Farr's opening address, have already appeared in our own *Journal*.

Since the last anniversary the Council have had to deplore the loss by death of Major-General Sir Alexander M. Tulloch, K.C.B., one of the earliest and most active supporters of the Society. He especially devoted himself to researches in connection with the mortality and sickness of Her Majesty's land and sea forces on home and foreign stations. His latest published work is a paper, read in these rooms, upon the Pay and Income of the British Soldier as compared with the Wages of the English Agricultural Labourer.

* The works marked * are donations.

It appeared in the Society's *Journal* not long previously to his demise.

The Council congratulate the meeting upon the success of the past season, which, owing to the spontaneous efforts of the Fellows in promoting Statistical Science, may fairly rank with its predecessors; and they confidently anticipate that the same exertions which have hitherto sustained the Society in its career of usefulness, will not be wanting in the future.

The Chairman moved the adoption of the Report, together with the Abstract of Receipts and Payments, and the Auditors' Report.

The Resolution, having been seconded, was carried unanimously.

A Ballot was then taken for the election of a President, Council, and Officers, for the ensuing twelvemonths, and the following was declared to be the List, viz.:—

COUNCIL AND OFFICERS FOR 1865-66.

President.

THE RIGHT HONOURABLE LORD HOUGHTON.

Council.

Charles Babbage, M.A., F.R.S.
Colonel George Balfour, C.B.
A. J. Beresford Beresford-Hope
Sir John P. Boileau, Bart., F.R.S.
William John Bovill
Samuel Brown
William Camps, M.D.
James Caird, M.P.
Edwin Chadwick, C.B.
Leonard Henry Courtney
William Farr, M.D., D.C.L., F.R.S.
Right Hon. Earl Fortescue
William Augustus Guy, M.B.
James Thomas Hammick
Frederick Hendriks
James Heywood, M.A., F.R.S.
William Barwick Hodge
Charles Jellicoe
Francis Jourdan
Leone Levi, F.S.A.
William Golden Lumley, LL.M.
Matthew Henry Marsh, M.P.
George Moffat, M.P.
Sir Roderick Impey Murchison, K.C.B., G.C.St.S., D.C.L., LL.D.
William Newmarch, F.R.S.
Frederick Purdy
Colonel W. H. Sykes, M.P., F.R.S.
W. Tite, M.P.
Harrington Tuke, M.D.
Rev. William Whewell, D.D., F.R.S.

The names of the New Members of the Council are given in Italics.

Treasurer.

William Farr, M.D., D.C.L., F.R.S.

Honorary Secretaries.

William Augustus Guy, M.B. | William Golden Lumley, LL.M.
Frederick Purdy.

Sir John P. Boileau moved a vote of thanks to the President, Council, and Officers, for their services during the past year, which was carried unanimously.

A vote of thanks to the Chair concluded the proceedings.

The Auditors made the following Report :—

" Statistical Society,
" 12, St. James' Square,
" *London, 3rd February*, 1865.

" The Auditors appointed to examine the Accounts of this Society for the year 1864

" Report :—

" That they have carefully compared the Entries in the Books, with the *Vouchers* for the same, from the 1st January to the 31st December, 1864, and find them correct. The *Receipts* (including the Balance from 1863, of 330*l.* 9*s.* 4*d.*) have been 1,078*l.* 19*s.* 1*d.*, and the *Payments* 903*l.* 15*s.* 3*d.*, leaving a Balance in favour of the Society of 175*l.* 3*s.* 10*d.*

" They have also examined the statement of *Assets* and *Liabilities* prepared by the Council; the *former* amount to 1,923*l.* 7*s.* 1*d.*, and the *latter* to 136*l.* 3*s.* 8*d.*,—leaving a Balance in favour of the Society of 1,787*l.* 3*s.* 5*d.*

" They also find that at the end of the year 1863, the number of Fellows was 357, of whom 10 Died, 13 Resigned, and 3 are Defaulters, making in all 26, and that 34 new Fellows were elected during the year, leaving 365 as the number of Fellows on the list, on 31st December, 1864.

(Signed) " James M'Clelland,
" Edw. T. Blakely,
" Fredk. Hendriks,
} *Auditors.*"

The statement of Receipts and Payments, and Assets and Liabilities, is as follows :—

(I.)—Receipts *and* Payments *of the* Statistical Society *for the* Year 1864.

RECEIPTS.

	£	s.	d.
Balance in Bank, 31st December, 1863 ..... £329 13 5			
Petty Cash Balance in Assistant Secretary's hands ..... – 15 11			
	330	9	4
1864.			
Dividends	27	14	3
Subscriptions:—			
279 for 1864 at £2 2*s.* ... £585 18 –			
Arrears—5 „ 2 2*s.* ... 10 10 –			
	596	8	–
Compositions 3 at £21 21*s.*	63	–	–
Journal Sales £35 17 6			
„ Advertisements .... 4 10 –			
	40	7	6
Legacy (Beriah Botfield)	21	–	–
	£1,078	19	1

PAYMENTS.

	£	s.	d.
Rent	75	–	–
Salaries	168	–	–
Printing *Journal* £322 12 11			
Advertising „ 24 7 6			
Printing Index to *Journal* 54 2 –			
	401	2	5
Library	20	19	–
Stationery and Sundry Printing	27	3	2
Postage	19	17	6
Incidental Expenses	32	10	2
Ordinary Meeting Expenses	37	8	1
Fire and Lighting	11	16	1
Furniture and Repairs	19	14	3
Investment in Consols	90	4	7
Balance in Bank, carried to 1865 .. £167 3 –			
Balance Petty Cash, carried to 1865 .. 2 18 4			
Balance Advertisement Cash carried to 1865 ..... 5 2 6			
	175	3	10
	£1,078	19	1

(II.)—Balance Sheet *of* Assets *and* Liabilities *on* 31*st* December, 1864.

LIABILITIES.

	£	s.	d.	£	s.	d.
Printing *Journal* for Dec., 1864	91	–	–			
Making Index	4	4	–			
				95	4	–
Stationery and Sundry Printing				15	10	7
Lighting				1	10	10
Repairs				15	7	9
Books				3	5	6
Map (Stanford)				5	5	–
Balance in favour of Society				1,787	3	5
				£1,923	7	1

ASSETS.

	£	s.	d.
Cash Balance ..... £167 3 –			
Petty Cash Balance ... 2 18 4			
Advertisement Cash Balance 5 2 6			
	175	3	10
Investments:—			
3 per Cent. Consols (328*l.* 15*s.* 4*d.*) cost	300	–	–
New 3 per Cents. (671*l.* 14*s.* 8*d.*) cost	657	4	7
Property (Estimated Value):—			
Books in Library £400			
Journals in Stock 200			
Furniture 100			
	700	–	–
Arrears due and recoverable (say) ..	21	–	–
Journal Account with Stanford	69	18	8
	£1,923	7	1

On the Statistical *and* Fiscal Definitions *of the word* "Income." *By the* Rev. J. E. Thorold Rogers, M.A., *Professor of Political Economy in the University of Oxford, and Tooke Professor of Economic Science and Statistics at King's College, London.*

[Read before the Statistical Society, March, 1865.]

It will not be necessary, I hope, to apologise for introducing anew to the attention of the Society, a question the discussion of which has so often occupied the time and tasked the abilities of the Fellows. The subject is one of great interest, of difficult interpretation, and of warm debate. It is not, I believe, too much to say, that it is from this disposition among the Fellows to argue on the abstract significance of the term which forms the material for this paper, that attempts, hitherto indeed unfruitful, have been made to settle the basis on which the latter sense of the word "income" should be taken. The practical service which dispassionate inquiry into fiscal questions renders to the administration of any country, is at once valuable as a guide into the determination of principles, and as rendering easy the battle against self-interest and prejudice, which, to judge from the language of public men, is the hardest part of the work in defining the word "income." And though I feel sure that in the course of the discussion consequent on this paper, much more information will be thrown on the subject than will be found in the writer's statements, I shall hope first to show that the two senses of the word should be distinguished and contrasted, and next, that some very intelligible and legitimate objections may be taken to the persistent identification of all incomes on the mere ground of numerical equality.

One definition of income is purely statistical, and is determined by collecting the quantity of all products of labour achieved by all the members of a given community, and reducing their quantity roughly to a money value. Were it possible to procure full statistical information as to the amount of home produce, and nothing but short-sighted prejudices and ignorant fears have stood in the way of this desirable knowledge, we should be able by the contrast between production and prices to determine with sufficient precision the rate at which capital is accumulated, and thereupon, as capital is accumulated with a view to profit, the quantity of capital as related to the amount of income.

All income, with one exception, rent of natural fertility or advantage, is derived from capital; the cases in which capital is immediately used as income being, economically considered, too unimportant to deserve attention. For by the natural tendency towards accumulation, a tendency strengthened by any destruction of capital, they are rapidly counterpoised. The fact that A squanders, and B employs unproductively the capital they possess, will have, on the supposition that the general saving is in excess of the spending, no effect on public incomes, and will not diminish public wealth, because, however vicious or foolish the practice may be, it makes it possible for the stimulus of saving to be applied in some other direction.

Similarly all capital is employed for the purpose of income. It is not necessary to remind the Fellows of this Society, that wealth is not capital except it be employed in the maintenance of labour, or that potential capital has, except very indirectly, no economical value. To save, in political economy, is to spend, that is, to spend with a view to profit. Reserves or hoards, however useful or necessary they may be, are in effect suspensions of productive action, and the amount of such reserves will be, by the operation of economical laws, always reduced to the lowest quantity consistent with commercial safety, that is, with protection against particular contingencies.

I am aware that I am in danger of uttering some tedious truisms by dwelling even for a short time on these elementary economical axioms. But it is necessary, I submit, to state them, in order that we may arrive at the statistical definition of income, and that we may indicate its difference from that of the fiscal definition.

All wages of labour are products of capital. It is clear that the simplest physical exertion to which any economical value can be assigned is rendered possible by a previous expenditure, the purpose of which is to make the labourer fit for his work. This expenditure, indeed, in relation to profit, is exceedingly great, far greater, perhaps, and more costly than for the production of any commodity in which capital is fixed. It takes on an average probably 100*l.* to make the cheapest and lowest kind of labour effective; and the possibility of profit on this expenditure is very small, as is indicated by the fact that the supply of labour is almost always in excess of the demand, and by the proportion which the amount of income necessary for maintenance bears to the margin from which a saving or a replacement of capital can be effected.

It seems to me wholly unphilosophical to ignore capital in the person of a labourer, and to recognise it in a machine. Both have been made effective by expenditure, and the expenditure has been incurred with a view to production. The fact that a different rate of

remuneration rules in the one as compared with the other, although it may militate against the economical generality, that the tendency of profits is to an equality, does not affect the truth, that labour and machinery are equally the products of capital. But as all capital is produced by labour, and as all capital is employed in setting labour in motion, it follows that all income is produced from capital, and that while the definition of statistical income is inclusive of the proceeds of all labour, it cannot include anything which is not produced in this way. But though all income, with one exception, is derived from capital, and no product of labour can be reckoned statistically, unless it be so originated, it does not follow that the converse of the proposition is true, namely, that all the profit of labour and capital, interpreted in their fullest sense, is a part of income. To hold such a position would be to confound the whole with its parts, and to reckon the whole with the parts, as jointly contributing to a quantity.

A calculation of statistical income would include only the gross value of all produce, irrespectively of the persons among whom the quantity is distributed. That distribution must be unequal from natural causes, and the inequality may be further increased by factitious arrangements and enactments protective of particular interests. The effect of such an artificial interference with the natural distribution of produce among its several recipients, may not affect gross income, except it be so special as to stop production, by checking the legitimate growth of population, or by dwarfing the energies of labour. And of course concurrently with this limitation of the effectiveness of labour by exceptional advantages accorded to individuals or classes in the distribution of the produce, labour may be rendered less effective by the incidence of taxation, by the expense of governmental machinery, and by the burden of indebtedness.

The exception to which I alluded above is rent, in the strict meaning of payment made for the use of the natural powers of the soil. For this, the Ricardian sense of rent, no capital has been expended, and the sole cause of the profit derived by the owner of the soil is to be found in the competition of population for agricultural produce. To reckon rent with the produce of labour, and as part of the gross income of a nation, would be to reckon the same thing twice over, once in the produce, a second time in what is deducted from produce.

The answer to the question, thus, What is the statistical meaning of Income? is to be given by means of the answer to another question, What is the gross value of the produce of labour in any given year? Out of this produce every person is paid his share in the distribution, in consideration, in so far as his contribution to the produce is determined commercially and economically, of the aid

which he renders personally to the efficiency of production; and this produce is to be calculated from the joint sum of what is got together by labour for the purpose of home and foreign trade, and represented in material objects, and from these alone.

It is commonly the case, that when calculations of national income are made, other elements are reckoned besides material products. Estimates, for instance, are given of the wages of labour in the sense of mechanical labour only, and of the income of the owners of real and personal property, and of the professional classes, as derived from the aggregate of the income tax schedules. To these are added the sums received from investments in foreign countries. But all these calculations seem to me to be vicious, because they have a tendency towards reckoning the same element over and over again; and therefore give a factitious magnitude to the amount.

Few persons, I imagine, would reckon the dividends on public securities as a portion of income, but would look on them as a diversion of part of the products of labour to the fulfilment of a high political and economical obligation. But if we take for granted, as we may for the sake of argument, that true service was rendered for the liability incurred, the omission of which service would have entailed social, political, or economical loss, there is no radical difference between the payment to the public creditors, and the distribution of part of the gross value derived from labour among those who have subscribed capital for the formation of a railway. Nothing can be conceived to be a more persistent benefit than the fact, that at some time or other the country achieved security by the loan.

Again, no one would include the produce of taxation among the elements of national income. It would be clearly considered as a deduction from income, and as necessitating great sacrifices on the part of contributors, or what is among economists the same thing, greater labour. But on the hypothesis, which we again assume, that all the expenses of government are justified by the services rendered, there can be no real difference, in the general economy of society, between the labour of the public administration and the pains of a railway manager. To diminish the charge of government is, to be sure, of the greatest importance, but in the same way as it is desirable to replace expensive, cumbrous, or inefficient machinery by what is cheap, easy, and effective; it being always understood that the sole test of cheapness is efficacy.

If, however, we are constrained to exclude from the position of an independent contribution to income the aggregate of rent, the cost of the public debt and the charge of administration, we must, *pari passu*, exclude all income which is not represented by any material result. Such incomes are, to be sure, derived from services of the highest value to the community, and which could not be omitted or

suspended without the most serious results to the efficiency of all labour; but as they are paid out of the gross produce, so they contribute to, and are found in the value of that produce, and could not be reckoned over again except in defiance of the commonest logical rules.

There remains yet another source of income, the amount of which must be very variously computed. I mean advances to foreign Governments, or to foreign enterprise. Against this must be set the quantity of home securities held by foreigners, a sum probably far less than that with which it is compared, but still notable. It would not be to the purpose to show on this occasion, what is no doubt known well enough to the Society, how it is that such payments from abroad affect the course of trade, or how little, if we estimate their immediate and indirect effects, they bear upon the real income of the country in which they are received. Income, in short, is not to be compared with profits, and must be distinguished from capital. It is not, however, used in so limited a sense as to apply to those products only from which a portion is to be set aside to replace the loss of capital, except that assignment is immediate. The gross amount, for instance, of exports and imports is not income, for some portion of this is capital perpetually renewed. But the gross product of capital is reckoned as income, though the capital be in some cases consumed in the creation of the income, provided always it be replaced to an equal or greater amount from some other source. If, therefore, on examining the subject, that definition of statistical income be taken which reckons the value of material products only, and which asserts that the national revenue is to be found in the joint produce of all labour as exhibited in tangible objects alone, we shall, I think, be able to avoid the confusions which are induced upon this question whenever it is estimated from any other point of view, and the contradictions which are involved in rival theories on the subject.

Economists have calculated income without defining it, and have, therefore, tacitly assumed that it includes the value of all incomes in distribution, instead of all incomes collected. And again, financiers have always treated income, both under the old and new income tax, with some comparatively unimportant exceptions, as representing gross income, the practice being, that all income should be taxed equally, however derived; and the sole limit put on the extension of the tax being the charge of collection.

This is not the occasion on which to discuss the merits of a property as opposed to an income tax. It may be observed, however, that whenever the tax is one on income, it will always be the case that some kinds of property will enjoy a partial, others even an absolute exemption from taxation; and that, therefore, the question

of the comparative equity of the two methods cannot be said to be determined.

It is clear, indeed, that whatever may be suggested as the basis of taxation, taxes must be paid from profits, the only exception to this rule being the tax on successions to property. But the rate at which individuals may contribute to the aggregate of taxation may be very different in relation to their individual profits, and affect them in very different degrees of severity.

Hence it will be manifest that if income, considered collectively, as comprising all material products of labour, be now treated in its distributive aspect as indicating the power of expenditure possessed by individuals over that portion which they receive, that large and very variable deductions must be made from gross, in order to arrive at net, income. Out of the amount of each person's income, contributions to a greater or less amount are made of necessity to the incomes of others; the most notable among their contributions being made directly or indirectly by taxation, imperial and local, by the charge which the appropriation of the soil and the demand for special sites enable the owners of land to levy, as well as by the necessity which exists for replacing the exhaustion of capital. Income considered as personal revenue, is not what one receives, but what one can spend. And it is surely just that a tax should be levied on the capacity to spend, and not on mere receipts; unless finance is to mean a raid on the weak and unprotected. An avowal that taxation should be levied on gross proceeds, would be the assertion that a graduated income tax is a legitimate financial expedient. Such a theory, however, has been denounced, and rightly, as spoliation. But in practice it is the inevitable consequence of the rule on which the tax has been hitherto assessed and collected. I do not say that such a purpose is present to the parties who vindicate the existing scale of charges on income, for they have never attempted to define either income or profits; but I think it may be proved that the incidence of the income tax favours landlords, traders, and some fund owners, and presses with special severity on professional persons, especially on such as have only what is called a precarious income; for if the proportionate payment of the latter class is in excess, it is clear that a portion of the just burden is transferred from one body of men to another.

A landlord is taxed on a spontaneous income issuing from a material, the value of which is constantly increasing. Of the fact of rise in rents there cannot be the smallest doubt, even if we limit rent strictly, as it should be limited, to the profit on the natural powers of the soil. I have, I think, mentioned before in this Society, that while prices of the first necessaries of life have as a rule risen ten times in nominal values since the sixteenth century, rents of the

same parcels of land have risen eighty times in the same period, and that the value of this element of personal income is being constantly enhanced. Further, this species of property achieves peculiar favour from the legislature. . It has in effect no burdens of a special character upon it, as has been commonly alleged. The two forms of local taxation which appear to press upon land—poor rates, for instance, and highway rates—are in reality mere substitutions. If there were no poor rates, the wages of labour would inevitably rise; and the rent of cultivated land depending on the cost of agriculture; rents would as inevitably fall. At present the landowner pays indirectly only a part of the charge of wages, since much of the poor rate is collected from those who do not employ labour productively at all. Similarly a highway rate is only a means for economising labour, for a good road means the employment of less power in drawing carriages. Here, however, by means of a system of turnpike tolls, the landlord contrives to throw a large share of what should be done at his cost on the shoulders of the general public, and is constantly wearing out a road at other people's charge. Up to a late period he was exempted from the payment of succession duties, and even now the convenience of a family settlement is made an excuse for his contributing to public necessities at a diminished rate, and a privilegium, which should be visited with a fine for the licence, is gravely made the ground for exemption from the burden which lies on the great mass of the landowner's fellow countrymen. He can borrow money from the nation at rates of interest lower than could be got in the open market. The tax on imported corn, affecting as it does all that is sold, is equivalent to the gift of at least a million sterling annually to the landowner. His personal income, that is, his power of expenditure, is thus exceptionally increased by legislative acts and legislative omissions, and he occupies a particularly beneficial position. I allude the rather to these facts, because in the report of evidence published by Mr. Hubbard's committee, I constantly recognize this foolish or dishonest appeal to the exceptional burdens imposed upon land.

Now one characteristic feature of such a spontaneous income as that which proceeds from land, is that the receiver has a larger discretion in his personal expenditure. I am not now alluding to his comparative exemption from the necessity of saving in any sense, and relief from any concern about replacing his capital, but to his power of choosing the locality of his residence and expenditure. If, for instance, I hold an office which compels my occupying an expensive house, when, if I had the power of exercising any discretion in the matter, I could get similar accommodation at half the cost, and I pay an equal tax on my income, I am to all intents and purposes the victim of a graduated income tax, and, by implication, the man whose

discretion can be exercised, profits by the arrangement. In effect, the practice is to show him still greater favours, for it is said, that great mansions are rated habitually at nominal sums.

This wrong is remedied to some extent in the case of the trader, part of whose house is reckoned as a charge on his business; but I cannot discern the equity of exempting the trader's shop, and taking no account of the physician's abode as part of the necessary charge of his occupation. To tax either at the rate of a purely private house seems to me unfair, nor is the injustice much mended by exceptional consideration shown to one. He has evidently less to spend out of the proceeds of his income than the man whose motions are free, and who is at no charge in the production of his revenues.

There is, of course, an obvious resemblance between the condition of the fundholder and the landowner. Both are in receipt of incomes on which no pains or anxiety are exercised, and both have the fullest discretion in the expenditure of all which they receive. But withal there are some marked differences between the two. On the hypothesis of a permanent income tax, I am, I confess, at a loss to reconcile its first imposition on the fundholder with the simplest principles of public morality. It would seem that to grant, in consideration of capital advanced for the service of the State, a perpetual annuity at a fixed rate, and subsequently to diminish the rate of the annuity without giving the option of repayment, is mere spoliation. After a time, of course, matters right themselves. The tax diminishes the capital value of the annuity, and on transfer ceases to be a wrong to the new purchaser. But the morality of the transaction remains the same. There is nothing parallel to it in English financial history, except perhaps the payment of the public dividends in a depreciated paper during the suspension. No one, I believe, justified this line of action originally, though there were not wanting persons who urged that since the act had been once committed, it would be equitable to make the levy perpetual by diminishing the quantity of gold contained in the sovereign when cash payments were to be resumed.

The trader pays only on his profits. It is a well known fact that profits tend to an equality, and that the difference between the rate of profit and the rate of interest is the measure of the skill and labour employed by the trader in the management of his capital. If in consequence of loss or ill success in business the trader's profits are *nil*, and he is forced to trench on his capital, he would not, I suppose, be liable to a charge for the tax at all. As a fact, indeed, he occupies a still more beneficial position, for he is empowered to make his return on an average of three years, or on the profits of the last. No one would deny that since he has chosen to employ his capital in this way, he should pay out of the profits of his business a

full rate on the capital he possesses, even if it be alleged that he should receive the benefit of an exceptional rate in respect of that portion of his profits which is due to his skill and superintendence. But in reality the trader is largely considered, first by the reduction in the rate upon his premises, next by the power of return alluded to above, and lastly because in the great mass of business of this kind there is greater power of compensation by increased charges on the public for service rendered, than in other occupations where competition is more active, and remuneration more fixed. It is well known that the power of combination for the purpose of maintaining prices is possessed by the larger number of the trading classes, and that the power is used; and, under these circumstances, I do not conceive that traders as a body are exceptionally visited by the tax. At any rate, if a calculation were made as to what is the ordinary interest on capital—a virtually spontaneous source of income—and what is the remuneration generally procured for supervision in a business of what may be called a safe character, it would not be found I imagine in effect, that the present amount of payment on profits in trade would be much diminished, even if a very liberal interpretation were given as to the scale at which the latter contributory to the profits were rated. It has always struck me that traders, like landowners, have been treated very generously by the administration, and the only interpretation which I can find for this liberality, is the obvious one, that they could not be conveniently affronted. I am aware, of course, that we have only entered on the vestibule of economical freedom, and that we are surrounded in all directions by protected interests; but surely the most odious form in which protection can exhibit itself, is when it comes before us in familiar drama of robbing Peter to pay Paul. Nor am I less alive to the expediency on the part of those who wish to occupy the Pauline status, of the great value of that rhetorical figure so often used as to the inquisitorial nature of the tax. It would be very much to the interest of those who are harshly treated by the tax, if the inquiry were really that of a just inquisition, in other words, of an honest interpretation of its incidence.

On the other hand, the owner of house property, especially that held on short leases at small ground rents, is taxed very unequally, Take, for instance, the facts of the town in which I live. Great part of the houses in Oxford are held—pursuant to an Act of Elizabeth disabling corporations from longer leases—at periods of forty years only; renewable, if the corporation pleases, at seven or fourteen years. Of course, for obvious reasons, such a house is built as badly as possible; the repairs on the house absorb a large portion of the income; and the capital of the lessee, since the corporations are exercising largely their discretion of declining to prolong the term,

is rapidly being consumed. But the tax is levied on the gross rental —a rental which I submit is not, and cannot be, legitimately fiscal income. The same reasoning applies to the profits of mines. Now, to say that there cannot be found a valuation of the interest which the lessee of a house and the shareholder in a mine has, is to deny the possibility of an every day transaction. The capital absorbed in a mining transaction is a matter of obvious scrutiny; the rate of profit is determined easily by the market value of the shares.

It has been sometimes said that equal taxation on permanent, and precarious or terminable incomes, is just, because the permanent income pays the tax in perpetuity, the precarious only while the income accrues. But this reasoning leaves out of sight that the capital, in the latter case, is generally consumed, in the former, *eo ipso*, is perpetual, and at any time renewable by sale. It omits also to recognize that the advantage of administration is prospective as well as immediate, and that by the same course of reasoning, when the supposed benefit derived from a public debt contracted in past time is refuted or exhausted, repudiation would become legitimate, and even obligatory; or perhaps, to put the case most clearly, the best illustration of the distinction laid down in the justification alleged, is that of the seizure of the whole that an individual may possess. In this case, no doubt, the tax would only be paid once.

The peculiar wrong of the income tax assessment falls upon professional men. By this word I mean all who are in receipt of fixed and conditioned incomes, and all who are forced by social and other necessities to incur a large outlay in earning a competitive income. I understand a conditioned income to be that which is dependent on residence and the fulfilment of duties, as that of a clergyman or a clerk; a competitive income one which, like a barrister's or a physician's, stands in need of large social advertisement. He cannot reduce his liabilities proportionately to his receipts. The clergyman, whom the legislature it would seem delights to vex, is ordinarily precluded from deducting what is occasionally necessary for the due discharge of his office, the stipend of a curate. I suppose that the shopkeeper is permitted to deduct the wages of his servants from the schedule of his gross receipts. At any rate it needs no great sagacity to imagine that those parties are subjected to a graduated income tax, and fully as I agree with those who denounce such a method of taxation, I am the more disposed to do so when I see the graduation inverted, and a heavier charge laid upon the poorer contributor. We can most of us remember the argument adduced with conclusive force against the tithe on produce, that it taxed unequal intelligence, cost, and activity at equal rates. Now, an income tax is of the nature of a tithe, that is, it possesses these characteristics.

It is sometimes said that the effect of a permanent income tax would be to right matters by diminishing the competition for profits in certain callings; and that, for instance, the medical man is indirectly compensated by the fact that the licensing system which such a tax amounts to, leaves him a larger margin of possible gain. This reasoning of course can apply only to that state of society in which the tax, having long existed, has actually affected the supply of fresh agents; meanwhile the existent contributors are mulcted beyond their just liability.

It is no doubt convenient and abstractedly correct to consider that the pressure upon every calling is regulated by the advantages accruing from following it. But this rule is liable to large deduction in practice.

Many professional people fulfil, and will fulfil duties under unequal burdens and unequal compensation. Many persons, whole classes indeed, are very patient under the prospect and incidence of fiscal inequalities. There were no parties who were more naturally alarmed at the abolition of the corn laws than the beneficed clergy, partly because there was a general belief in the future diminution in the market price of all farm produce, much more because their rent-charge was most absurdly settled upon the average of three elements only. But they never made the smallest move against the agitation which happily resulted in the overthrow of these mischievous enactments. An economist cannot take account of conscience, or sympathy, or habit or tradition, in the competition for employment, but he is a mere doctrinaire if he forgets them.

One of the Fellows of this Society, my friend Mr. Sargant, in a courageous recantation of some older and more instinctive opinions of his on this subject, has founded the equity of an equal income tax, on the presumption that equal protection is extended by the State to all persons alike. Now, if it be seen that an apparently equal tax is not equal, this defence of the existing practice is the heaviest charge against it. But equal advantage seems to be a very unsafe ground on which to defend any tax. It may be disputed in fact, and, even were it admitted, it would open the parallel question of how far parties contributed equally to public wealth in its best and truest aspect. A person weak or helpless, by sex or age, is surely more protected than one who is strong and capable of maintaining himself against aggression. Mr. Sargant's theory would clearly free all volunteers from taxation, increase it upon children and widows. A person who is constrained to vindicate a right in a court of law is, by the very fact, less protected than one who is under no such necessity. No man, therefore, *durante lite*, should be liable to the income tax. A person who, like a landowner, possesses an exceptional right to full payment of his claim from the assets of an

insolvent before an ordinary creditor, is as manifestly more protected. And the relations of an individual to the community are many sided; he is not only protected by it, but he contributes towards its resources and its wealth; his contribution may be many times more than the advantage reciprocated. On the hypothesis of equal payments for equal protection, it is clear that equal amounts should be contributed from equal resources. Now a man the exigencies of whose domestic ties are large, is in reality contributing more than a man whose misfortune or whose prudence has relieved him from such obligations.

This leads me to consider the suggestion which Mr. Mill has made and insisted on in his work, and in his evidence with great pertinacity. I am, I confess, at a loss to discern the arithmetical fallacies which he says are inherent in the scheme which could distinguish income out of permanent capital, and income out of labour and risk, that is, out of depreciating capital. But I am still more at a loss to recognize the equity of his doctrine of "savings." Unfortunately he has not defined his term; though, as far as one can gather from his evidence, it means merely the accumulations of such capital as appear in the most tangible and immediate forms, as stocks shares, and the like. He argues that all persons who should save should be computed to save, and so thereupon relieved from a portion of the tax. But he does not tell us, except generally, why a man should save; he will only save in order to secure himself against want in the time of his old age or incapacity, or to make provision for his children; a relationless annuitant has no manifest motive for economy.

It does not appear that Mr. Mill grounds his claim for the obligation of saving on the fact that a man has ties in the shape of children. This possession he considers to be wholly voluntary, and therefore no legitimate argument for exemption. I agree with his inference, but I see that in the majority of cases it is fatal to the likelihood of saving, in his sense at least, and by implication reduces the argument for exemption to a narrow sphere of operations, those, namely, of provision against old age.

But surely the limitation of the word saving to accumulations of immediate or tangible capital, is in the fullest sense arbitrary. Suppose, for instance, that two men have an equal income, and an equal number of children; the one man gives his children the education of day labourers and saves the surplus, the other expends the larger portion of his income in a beneficial education to his children, and so has a very small surplus to save. Shall we grant—on the most familiar law of capital, that it is effectively saved only to be consumed—that the latter is no saving, the former is. Surely an educated, as contrasted with an uneducated man, is a highly effective

as opposed to a very ineffective machine; and surely from a national point of view the expenditure of capital in the one is as much a source of public wealth, as the accumulation of capital in the other. I do not so much object to the principle that capital saved should not be taxed *in transitu*, except upon succession; but I cannot agree to the limitation of the term saving to mere accumulations invested in securities. It is worth while to observe, moreover, that as long as there exist any fiscal charges on necessary expenditure, the kind of saving for which I vindicate the name *is* taxed *in transitu*. This must be borne in mind if we attempt to settle the amount of capital expended in educating such persons as earn incomes, with a view to taxing the capital implied in their productive capacity. A man who saves by way of investing capital in a recoverable form, or in an immediately saleable shape, is exempt from taxation in the act of saving, except in so far as he may be visited by stamp duties on purchase or transfer; but another, who expends a portion of his income on the industrial or professional education of his children, is taxed in the fact that the charge of the machinery is enhanced by being made liable to fiscal contributions in its creation and its working.

It was no doubt convenient for the persons who formed the last parliamentary committee on the income tax, to profess incapacity for discerning the fundamental difference between spontaneous and conditioned incomes, between these incomes which depend on the labour of others, and those which are derived from the labour of the recipient himself. But it was a distinct abandonment of administrative duty, when the members of the committee were perpetually putting the question to the witness, whether he could supply any means by which the parties who would, *ex hypothesi*, be liable to an increased charge on the adjustment of the tax, could be reconciled to the payment. If it could be proved that the incidence was unfair, it was surely in the last degree irregular, to perpetually insinuate that justice could not be done because those who benefited by the wrong had the largest share of representative power, as well as the most powerful motives for resisting any equitable adjustment. Every shilling of rent paid for the natural powers of the soil, is in effect derived from that industry which alone renders rent possible, from that accumulation of labour which creates by its competition for a space on which to exercise its energies, a price for bare standing ground. No person, of course, can object to the existence of rent as a payment for a necessary continually enhanced by the growth and activity of society; one may as well object to the law of gravitation, but it can be only an affected stolidity which professes not to see that it is in its very nature the proper object for considerable contribution to the State, instead of being the object of exceptional immunity.

That therefore is, in the fullest sense, fiscal income, which is the product of spontaneous social forces, and that profit on capital which is irrespective of any labour expended on the creation of the income. Of this there are two kinds, rent of land and interest on advances; rent having this special advantage, that while capital out at interest neither increases nor diminishes, and the capital of labour is in its very nature decreasing perpetually, rent is affected by an inverse law, and is perpetually increasing with the progress of society. And though some part of the advantage which the possession of land induces, is neutralized by the fact, that the rent of land ordinarily represents the lowest rate of interest on purchases, because the prospective improvement in its value, is taken into account by the purchaser, to say nothing of its exceptional immunities and special privileges, yet it clearly does not make all the difference, and affects manifestly such parcels of land only as are the subject of actual transfer by sale. But by far the largest portion of land in this country is virtually subject to a perpetual entail, and its rent cannot be said to be in any sense countervailed by the increased charge implied in its purchase.

The profits of all capital are not visited by taxation. For instance, capital is largely invested in works of art, not only with a view to the immediate pleasure or vanity of the purchasers, but quite as much to the pecuniary advantages which will be consequent on the dispersion of the collection. It is not the practice to tax this kind of property, though it is not easy to see why it should be exempt on either aspect of its possession. It is perfectly ridiculous to say that the levy of a tax on such investments would discourage purchasers. It does not do so in the United States, where a tax on all kinds of property has long been the rule. The same reason applies to private wine cellars, the contents of which have a cumulative market value, and to many other similar forms of capital.

All men who labour with the view to the acquisition of income, have, it seems to me, two distinct grounds for partial exemption. One of these is the necessity for replacing the capital included in themselves; the other is the limitation put on their spending powers by the obligation of their *locus standi* for carrying on their occupations. Neither of these claims are admitted under the income tax; but the powers can be secured by the agency of a joint-stock company.

The tax on the proceeds of a joint-stock company are levied on profits only. Suppose the investment of capital in this case were a mine, leased for twenty years, and perhaps liable to exhaustion within that period. If during the continuance of this lease the company creates such a reserve as will suffice to secure at the end of the term, or within the period calculated for the exhaustion, a sum

equal to the capital originally subscribed, and at the end of the period re-grants the capital sum to the subscribers, it does not appear that the income tax could touch any more than the true profits of the company. Now, the short term, and the decreasing value, and the certainty of exhaustion, are the conditions which affect the professional man, with this difference,—*that he cannot make the reserve.* It is the fault or the fraud of some joint-stock companies, that they do not prepare themselves for the contingency of replacing their capital; it is rather hard upon individual men, that they have no power of taking this precaution. It is to the purpose, also, to remember that as the professional man's time is his money, as the proverb goes, or, in other words, that he cannot, in order to exist, waste it on appealing to Government officials; he has to put up with overcharges which he could prove, even on the theory of equal receipts meaning equal incomes, but cannot afford to rebut. Perhaps it might be worth while, in this age of joint-stock companies, for professional men to combine for the purpose of engaging the services of some person whose sole business would be to defend them against overcharges.

Often as we hear of false returns under the present system, ludicrous as have been some of the revelations consequent, in particular, on a scandalous compensation given to certain parties supposed to be injured by a law reform; and frequent as are the complaints about frauds on the revenue, the significance of such acts is seldom discussed. It has not even been, I think, observed, that the Income Tax Act does not define its own terms.

The comparison between an unfair act of government and the violence of an enemy; the question how far fraud is justified in evading the impost of the one, in the same way as it is admitted to be legitimate in deceiving the other, is perhaps an obscure and difficult problem in political casuistry, because there are infinite degrees of violence and wrong. No one, indeed, would doubt that there are extreme cases of rapacious administration, in which the evasion of governmental demands becomes a necessity, if not a duty, because obedience is the negligence of self preservation. And the more powerful and autocratic a Government is, the more difficult it is to evade violence except by fraud. That the administration felt themselves absolute in the present method of the income tax, will be plain, I think, from the perusal of the volume of evidence consequent on Mr. Hubbard's motion, as contrasted with the contemptuous silence of the report. That the impost is unfair, is in the same way contained in the fact that self-assessment is the rule in incomes which cannot be taxed at their source. Those, however, though of the same nature, which can be so taxed, are visited with the full measure of fiscal exaction. But the instinct or conviction of a fiscal

wrong, is the greatest temptation to public morality, and ought to be an object of anxiety to the administration.

The true corrective to this fraud, in many cases where voluntarily assessment is necessarily allowed, is found, I am convinced, as much in the knowledge that if one injured person may escape, other injured persons cannot; as it is in the acknowledgment of the duty that we are bound to render each our share to the charges of administration; and far more than in the impression that the theory of the income tax fulfils even the fundamental conditions of equity.

It is not, I believe, possible to defend an income tax either on the grounds of equity or morality. It is possible to defend a property tax. But the confusion of both in one title, and the argument that both stand on the same level is, I think, to confound rest with motion, to renew the fallacy of Zeno, to identify indefinite extension with limited quantity, and to visit the attribute of perpetuity on perishable and transient objects. Hence any substitution of an income for a property tax, any remedial measure founded on the acknowledgment of an identity between the two sources of revenue, is sure to involve contradictions and irregularities which no art can obviate.

The first income tax had its special defence. The people of this country, or at least those who guided its destinies, believed that the political being of Great Britain was comprised in the vigorous attitude which it took against France and its ruler, as well as in the necessity there was for maintaining public credit at all risks. This conviction, right or wrong, founded on an instinct of self-preservation; or on a mistaken panic, adroitly used and fomented for reactionary purposes; demanded sacrifices; and the English nation had to adopt means analogous to those which in a beleaguered city justify the spoliation of private granaries. For a very different reason, to sustain, namely, the credit of a financial operation, scientifically certain of success; but necessitated by party antagonism, and propounded by a timid, halting, repentant, unconverted statesman; and therefore involving, to weak and ignorant persons great risks; a second income tax was imposed. The experiment on the tariff was, as all prudent persons had predicted, entirely successful, but the anomalous and occasional expedient remains, repudiated at once by morality and equity.

I will, in conclusion, attempt, notwithstanding these inherent anomalies of an income tax, to suggest what appears to me the nearest approach to an equitable assessment; conscious, as I said before, that there are objections to be made to every scheme, and will finish this paper, already unduly lengthy, with a statement of the positions which I have attempted to prove.

All taxation must be derived from profits, with one exception,

and all profits, with one exception, are derived from capital. The profits of capital, therefore, are the proper subjects of taxation; the amount derived from this source being augmented by additions made from succession duties, and by levies on the rent of the natural capacities of the soil. And this capital is found at once in the quantities employed for profit, on the expectation, necessarily fulfilled, that they will be perpetually renewed; and on these portions which being fixed, are, in different degrees, not susceptible of recovery, but either last for a long time, or are rapidly exhausted.

Upon such capital, when it begins to yield a profit, a tax should be levied, at equal rates, on the quantity comprised in the object. Suppose, for instance, 2,000*l.* were expended in purchasing a perpetual rent of 100*l.* a-year, or a perpetual annuity of the same amount, or in educating a labourer, a property or income tax of equal amount should be exacted from each person who is in the receipt of the rent, the dividend, or the remuneration for labour. It is clearly easy to estimate the first two of these heads. with those sources of income cognate to them. Nor would it be difficult to assess professional or labour incomes, under a comparatively small number of schedules, by taking account of the capital expended on making the labourer capable of self-maintenance, and by calculating the age at which he ordinarily becomes capable of his professional exertions. At any rate we need not be deterred, were the principle admitted, by the chance that its working would involve some administrative labour at the hands of those who occupy their offices on the condition that they should render some equivalent return for the privileges they possess; and what is more to the purpose, if the labour be of such a kind as could be easily rendered by fifty persons in this room.

It must be admitted that there is a great objection entertained to financial theories; and appeals are constantly made to experience when it seems desirable to combat the logical force of a principle. To these objections there is one answer, gathered also from experience, that every single beneficial reform, in every direction, has been achieved by theory in refutation of experience.

I should be, as I have already said, prepared for many objections to this or to any other theory of an income tax. I will attempt briefly to advert to one or two which may arise, especially those connected with the partial exemption of some incomes because they seem to be of a terminable character, and the total exemption of others.

Successions under a strict settlement should be treated for the purposes of taxation as estates in fee. The permission to create such settlements, and the privilege of binding posterity in the interest of a particular family, is so manifestly a matter of private

advantage or convenience, as not to form the ground for any exemption from the full measure of taxation. An arrangement by which a testator or a settlor can confer protection upon a son or other object of his grant, against this person's own acts, should not be construed as a claim for relief from a condition which is attached to the grant or devise of another man, who may think that the gift of the corpus is better sense or truer justice, or what is even more to the purpose in an industrious community, recognises the necessity of leaving the objects of his act free to dispose of or deal with his gift or grant. And, for similar reasons, the same rule should apply to jointures granted under a marriage settlement, in case there be a further limitation of the corpus from which the jointure proceeds. All such grants are for fiscal purposes only nominally distinct from grants in fee. If the paradox, that primogeniture is for the benefit of society, can be maintained, the custom is at least of equal benefit to its object. If it be disputable, and few persons in the face of its universal explosion in the rest of the civilized world, would have the hardihood to deny that it is an open question, it can be still less the object of especial favour.

My theory would visit all profits on capital with a tax, whether they be small or great. I cannot understand why the profits on co-operative stores are exempt from taxation, or the rents of land devoted to what are called charitable purposes, any more than I can see the justice of exempting such corporate incomes as do not represent value in labour from succession duties; and I am still waiting for a proof from Mr. Mill that a property tax (such as I suggest) would be a wrong or a spoliation.

The positions, then, which I have attempted to maintain are as follow:—

1. Statistical income, that is, the calculation of the annual resources of any country, is to be discovered in the gross value of all material objects produced and purchased by its annual labours.

2. Income for fiscal purposes is that proportion in the distribution of this gross or national income which is allotted to each individual or appropriated by him, and is available for purposes of voluntary expenditure. In this sense only income can be called profits.

3. All profits are derived from the expenditure of capital, with one exception, that of the rent of land, and there is no true profit unless the capital be recovered.

4. All taxation must be derived from profits on capital, with one exception, the duties, namely, on succession.

5. No income tax can approach justice which puts the wages of labour on the same footing as the interest on stock and the rent of land.

6. All capital yielding profit should be taxed when it can be shown that a profit has been realised.

7. No income tax can fulfil the conditions of entire impartiality, but the nearest approach to equity would be achieved by such a system as (in addition to the above-named exception) treated that only as the subject of taxation which is represented by the capital expended in rendering profit possible.

On the Supposed Extinction *of the* Turks *and* Increase *of the* Christians *in* Turkey. *By* Hyde Clarke, F.S.S., *of Smyrna, Fellow of the German Oriental Society, of the Academy of Northern Antiquaries, &c., &c.*

[Read before the Statistical Society, 18th April, 1865.]

During my stay in Turkey, my attention has naturally been drawn to the alleged extinction of the Turks, and I have followed this subject up as my opportunities have allowed. I have been many times desirous of bringing it before the Statistical Society as an interesting problem deserving of examination; but I have, during my former attendance on the meetings, so frequently heard figures described as the chief end of statistics, that I have feared to engage in a matter which, from the nature of circumstances, does not yet admit of being so tested to any great extent.

I was, however, during my late visit to London, encouraged and invited to lay the matter before the Society, and it is to be hoped it will not be found unsuitable for an association before which alone the problems of political science can be brought for the purpose of being tested.

This subject too, if scant of figures, is pregnant with facts, and the paper and the subsequent discussion may be the means, by establishing facts and expelling errors, of putting it on a sounder basis, and of inviting the labours of other students, who may arrive at definite results.

I have myself eagerly sought for statistics, but notwithstanding the fragmentary labours of Ahmed Vefik Effendi and Subhi Bey, statistics can hardly be said to exist in Turkey, among either Turks or Europeans; and one great difficulty is, that the spirit of association for scientific labour, is there deadened by the bitter sectarian hostility of too many classes of the community.

It is one of the difficulties of investigating anything in connection with Turkey, that such prejudices are allowed full scope, and more particularly against the Turks, so that to say one word in their favour, is to be branded by the sections in contact with Europeans as a philo-Turk, and thenceforth to stand excommunicated. The European, from the moment of his landing, comes in contact with some class so bitterly prejudiced, either the Levantine half-caste, or the Greek. From them he receives his first and lasting impressions, and he may spend his life in the country without coming

in contact with the Turks, of whose language and institutions he remains ignorant. It may well be seen that such a person has no sympathies which will enable him to profit by intercourse with the Turks, to acquire real information from them, or to appreciate any statement made by or regarding them. The political ignorance of their own national institutions, of men who left their homes at 18 or 20, and who have spent their lives under alien auspices, tends to diminish the value of their observations, as they cannot apply comparative knowledge. Thus, things and institutions, common in Europe, are daily marked out for censure against the Turks, and represented as in opposition to European standards.

This state of affairs imposes great difficulties on scientific inquirers, as they cannot accumulate the requisite mass of facts, nor obtain adequate co-operation. Any amount of tales of atrocity and oppression may be obtained, certified, if need be, by consular reports, but the necessary information cannot be procured. Public opinion, among the Levantines and Greeks is in full agreement, but its articles of faith are not always consistent. Thus all are agreed that the Turks are rapidly becoming extinct, that infanticide is universal, but that polygamy is kept up to obtain progeny: again, that the Christians are being murdered and robbed wholesale by the Turks, but that they are increasing rapidly in numbers and wealth.

It is these very inconsistencies in what may be called the approved and accredited statements that naturally attract the inquirer and invite discussion.

The subject is one of political and scientific interest. We are invited to the spectacle of the extinction of a mighty and numerous people, such as took place with the ancient Greeks and Romans; and if this be so, we may seek in the living subject the causes, such as history has not recorded in the past, nor have scientific investigators yet been able to establish.

In such investigation we must, however, be careful that the canons we lay down be consistent and applicable everywhere under like circumstances.

We must too, first be clear what we have to investigate. Is it "the decline of the Turks," or "the decline of the Mussulmans in "Turkey?" Both are closely connected, indeed united, in the public mind; but the questions are very far apart.

In Europe there are Mussulmans, but, except in the capital, hardly any Turks. Beyond Asia Minor, to the east and south, there are Mussulmans, but hardly any Turks. In the greater part of the empire the Turks are an alien and conquering race as regards the Mussulman population, as much as they are in Europe with regard to the Christian population.

It has never been distinctly alleged, although implied by the

terms of the formula, that the Arabs are undergoing such extinction, or that their condition of vitality is other than it has been in times past. The Arab is no longer a ruling race, but it is difficult to persuade any one that it is a perishing race; and Mussulmanism is as safe therefore so far as the Semitic Arabs are concerned, as it is so far as the Indo-European Persians are concerned.

It is wanted to be implied that Mussulmanism is a distinct cause of national extinction; but the evidence is against this.

The Albanians, the Bosnians, and the Gipseys are divided between the Mussulman and the Greek persuasions, but they are not Turks. Although some of the allegations may apply to them, it is as well to leave them on one side, and to keep closely to the Turks, as each nation would require its own scheme of investigation.

For the same reason the Indo-European Koords in the east, and the Negroes throughout Turkey, are excluded from the present paper.

The question is, therefore, purposely narrowed to the Turks—the inhabitant race in Asia Minor, and the ruling race in the empire throughout which they are scattered largely, in Constantinople and Adrianople, in Egypt, and even yet in Algiers, their former possession.

We may repeat that the chief Mussulman constituents are—

Turks.
Arabs.
Negroes.
Bosnians.
Albanians.
Koords.
Gipseys.

The Persians are few in number; unmarried men congregated for purposes of trade in certain towns.

The other chief portions of the population are—

Jews.
Gipseys.
Christians—Armenians (Gregorians and Catholics).
Greeks.
Albanians (Greek and Catholic).
Bulgarians (Greek).
Levantines (Catholics and Greeks).
Jacobites and Chaldeans.

In considering the relations of the Turks in Asia Minor, we shall have to deal with the Jews, the Armenians, the Greeks, the Levantines, and the Jacobite, Chaldean, and Syrian Christians; the latter, however, only in small number. The Jews are found scattered in colonies descending from 10,000 to 25, wherever there is a consider-

able Turkish town. They are all what is called Sephardim, or Spanish Jews, and many are the descendants of refugees from Spain. Their language was Spanish, and is now becoming Italian; but many use Turkish as a household language, and all as an out-door language.

The Greeks, regarded in Europe as the descendants of the ancient Greeks, consist of two populations—the Rayah Greeks of Asia Minor, who are descended from the ancient aborigines of Asia Minor, perhaps the Iberians, and who speak Turkish; and there is a population of different look, the Hellenic Greeks, from continental Greece and some of the islands, who speak the corrupt modern Greek or Romaic, and who are likewise not of ancient Greek descent; but as Fallmerayer and Finlay have shown, are descendants of the Albanians or Arnaouts, with a possible mixture of Slavonian blood. Both bodies of Greeks belong to the Greek Church. The Rayahs are cultivators and shopkeepers, the Hellenics are shopkeepers, mechanics, and seafaring men. The Greeks are found in colonies in Western Asia Minor, occasionally occupying towns and villages to themselves.

The Levantines, sometimes called English, French, &c., are the offspring of European men with Greek and Armenian women, and of the intermarriage of the various half-castes. Their native language is Greek, and the first generations are chiefly Roman Catholics, and the others are Greek. They speak English, French, &c., with a peculiar idiom and pronunciation. Their number is comparatively few, and they are chiefly found in Smyrna and the neighbourhood, where they are engaged in trade. The like class in Constantinople, mostly of Smyrna descent, is called Perote, and many are employed about the embassies and consulates.

The Armenians are the descendants of an ancient population, seated from earliest history in Armenia, to the east of Asia Minor. They have a considerable colony likewise in the south-east of Asia Minor. Throughout Asia Minor they are scattered in colonies, sometimes very small, in the Turkish towns. Their home language is Turkish, or mixed Armenian, and their out-door language is Turkish. Their religion is Armenian or Gregorian, but some are Roman Catholics, under the name of United Armenians, and a few thousand constitute the new Protestant community or nation.

It may be as well to consider first the alleged causes for the decline and extinction of the Turks.

First. One noticed by all European travellers is the extraordinary number of Turkish graves and graveyards, many of them, or most of them, on the high roads in places, where there is now no population.

This is quite true, and requires explanation.

A circumstance as remarkable, but unnoticed, is that in Western Asia Minor; there are no Greek graves or graveyards in the country, so that it might be inferred there had never been a Greek population. The fact is, even in the great towns, with a population of many thousands, there is a very small Greek graveyard. The bodies are thrown into graves with quick lime, and every twelvemonth the few remains of these graves are collected, and sometimes the skulls and crossbones are stuck outside the churches.

The Turks, however, are a burying people, and each body is buried in a separate grave, as there is a superstition that at the Resurrection, the upper body might deprive the lower of the chance of rising to Paradise: thus the graves are numerous.

Estimating the average duration of life at twenty-five years, and the Turkish settlement as four centuries, this would give for a population of—

	Graves.
1,000	16,000
500	8,000
400	6,400
300	4,800
200	3,200
100	1,600
50	800

Thus even the smallest hamlet or village has attached to it a number of graves, and these are distributed, some in the nature of family graveyards. As on account of the feverishness of the plains, through which the summer roads pass, the villages are in the hills and not on the plains; graveyards are found alongside the roads, particularly if there are ancient columns for tombstones; and alongside the roads are buried numerous pilgrims, camel drivers, and wayfarers.

The graveyards, consequently, give no evidence of a former large Turkish population as contrasted with the existing population.

2nd. *Abortion and Infanticide.*—It is alleged by many authorities that Turkish women and their husbands generally countenance abortion and infanticide for various reasons,—the women to save the trouble of pregnancy, and the men to get rid of children they cannot keep, and in the belief of the decline of their race. That abortion is resorted to from various motives in Turkey, by women married and unmarried, as in our own and other countries, may be admitted as it is admitted for other countries; and the medical evidence to be found never goes farther than this.

To suppose any general practice of abortion among the higher or upper classes, is opposed to open facts. In Turkey the position of mother is higher than that of wife, and the first female personage of the empire is the mother of the sultan, the Valideh Sultan.

Among men and women there is an earnest desire for children, and whenever I have inquired, I have found husbands or wives have had children. The children in the streets speak for themselves, as do the family parties, and the uniform kindness of men and women to children. There are many families wherein the children of slaves and servants are maintained.

I have often asked men as to their brothers, and have often met men with several brothers.

There is nothing to show any careful observer, or make him believe that the state of the Turkish population is other than what it is commonly in Europe, particularly France or Spain.

3rd. *Sexual Vices.*—These are alleged as a special and prominent reason for the decline of the race. That they exist admits of no doubt. As, however, they exist among the Greeks and Armenians, and among the former perhaps to a greater extent, this cause cannot be sufficient as applicable to the Turks, because it applies to the whole of the populations, except the Jews, and perhaps the Levantines. It cannot be an efficient cause for diminished vitality, because it has prevailed among the Greeks for ages.

4th. *Small Number of Turkish Children and Large Number of Christian Children.*—All authorities unite in the assertion of this, and point to the respective streets of the Greeks full of children and of the Turks, silent.

This is a truth, the Greeks living in the streets, whilst the respectable Turks, like the English, have a great objection to their children, boys or girls, running about the streets; and in many towns Turkish boys and girls are sent to school from an early age.

Many of the Hellenic Greeks have large families, and generally speaking, in the towns the Turkish women seldom have many children alive.

So far as I have collected information, Turkish women give birth to several children, but the infantine mortality is severe.

The Jewish women have generally small families, though with several births; the infantine mortality being great from the unhealthiness of the Jewish quarters.

From great indulgence the mortality of boys in particular is very great among the Turks, and even among the wealthier Armenians; but among the Greeks, who are spare livers, it is less.

There is, however, no evidence that the permanent increase of Greeks is greater than that of Turks. The evidence, such as it is, being, as we shall see, unfavourable, there must be a mortality among the Greeks at a later period. This is in fact between 7 and 20.

5th. *Conscription.*—As the Turks alone supply the army, and the conscription has sometimes fallen heavily, it is assumed that this must be a special cause of diminishing the Turkish race.

The Hellenic Greeks, are, however, subject to military service; and during the war of independence they suffered very severely. Formerly they recruited the Janissaries.

The Armenians and Jews not being liable to military service, ought to have increased largely in four centuries of Ottoman domination above the Turks and Greeks; but this does not appear to be the case so far as we have evidence, if at all.

The Hellenic Greeks have probably more unmarried men than the Turks; but the fact is the national fecundity is not prevented, as is vulgarly supposed, by having a portion of its population unmarried, engaged in a military service or otherwise. Nations do not multiply arithmetically or geometrically in virtue of the number of marriageable adult males and females. Indeed, at the present period, the French population is virtually stationary, as that of Spain was in the last century.

6th. The *Plague* is supposed to have nearly extinguished the Turks. But as the plague has long since ceased, the Turks might have been expected to rally.

The plague was a fearful scourge, and under its reign the movement of the population was subject to great vicissitudes,—a circumstance which to some extent explains the discrepances in the accounts of the population of Turkish cities at various periods.

A real account of populations, as in India for instance, subject to the influence of severe epidemics, would be a valuable contribution. In some of the Turkish cities the plague regularly appeared every year, and the population fled the place.

7th. *Abandonment by the Turks of Quarters, Villages, and Lands.* —A proof assigned is that in several cities, houses in the Turkish quarters are now occupied by Christians, that whole villages formerly Turkish are now Christian, and that many estates have been purchased by Christians. This is the case, and it is not a new fact, but one which has often taken place during this century.

Generally, whenever in consequence of the immigration of Christians or Jews, the Turkish population of a street or village is pressed upon, the Turks leave, as the society, habits, and language of the new-comers are inconvenient to the Turkish women and children, just as in England for instance, the the settlement of Irish in a court will clear it of English residents. Unless the Turkish population can have its means of social organization and subsistence, its own shops and coffee houses, it is put to great social inconvenience. The Christians do not feel this equally.

A great many lands have been sold to Greeks for cultivation, and since the reform many Armenians and some Greeks have invested in landed property. This is in the nature of things and has not impoverished the Turks.

There is no evidence that the Turks have been permanently reduced by the plague, more than other portions of the population. Fever sometimes renders a whole village uninhabitable; this of course happens more frequently with Turkish villages than with Greek, because the former are the majority.

So, too, in consequence of the reform, the Christians and Jews are seeking better house accommodation. Where they can conveniently build in their old quarters or near them, they do so, but where they cannot they try to buy Turkish houses at high rates. In some cases the Jews begin first and the Christians follow.

The Turkish proprietor nets a high sum, but the neighbouring Turkish proprietors must likewise sell or let to Christians, or their properties will be depreciated for Turkish residences, particularly if the residents are of a better class of Turks.

These things are the natural result of the reform and if the reform did not work honestly and faithfully in giving greater privileges to the Christians and Jews they would not occur.

If Turks are displaced, because they let or sell their properties at higher rates, they do not therefore become extinct any more than people in other countries.

8th. *Smyrna.*—A late English Consul at Smyrna stated by writing and verbally that since 1830 the Turkish population had decreased from 80,000 to 45,000, and the Greek population had increased from 30,000 to 80,000. Hence he inferred the extinction of the Turks, and this is one of the main facts relied upon by authors and by parliamentary debaters.

Whether the Turkish population was 80,000 in 1830 or declined to 45,000 of late years, he must be a bold man who would attempt to prove. It is more probable that the population was not 80,000. If Hartley's figures be right it was not 40,000 in 1826.

The Greek population in 1830 may have been 30,000, or even less, for during the Greek war great numbers of the Greeks fled, and the Janissaries amused themselves by shooting Greeks in the streets. Hartley's estimate in 1826, most likely correct, was 15,000.

On the restoration of peace, the Greek inhabitants returned, and Smyrna again became a great centre of immigration for the Hellenics and Greeks of the Islands and to a greater extent than ever. Thus the Greek population may now be 80,000 or 90,000.

This fact, however, has not the significance assumed for it. The 80,000 or 90,000 Greeks are not the offspring and natural growth of the 30,000, but represent an immigration.

Asia Minor has always been a resort of the poor Greeks, and particularly since Greece has no longer been under Turkish rule, and the contrast between Turkish rule and Greek rule has more and more made itself felt. At first, after the peace, the immigration

set towards Greece and many rayahs went to seek the blessings for which they had been led to conspire. The result is that of late years the rayahs have been returning while the Hellenics are eager to seek the advantages of prosperity, safety of life and property and orderly government, which they obtain under the Turks.

In Constantinople there are probably 100,000 Greeks, of whom a large proportion are Hellenics; in Smyrna and its neighbourhood, not less than 80,000, of whom 50,000 are Hellenics.

What proportion of these are rayahs and what has been the extent of Hellenic immigration it is impossible to state. There is good reason to estimate the immigration at not less than 2,000 a-year. If the rayah immigration be taken at 500 a-year, this would give the following results from 1830 to 1864:—

Hellenic immigration	68,000
Rayah ,,	16,000
Population in 1830	30,000
	114,000

This, exclusive of natural increase, would consequently show a positive decrease of the Greek population in Smyrna and not an increase, and this is most likely the fact.

A correction must, however, be made for Greeks returning to the islands and a correction has been made for the immigrants proceeding to the interior.

The fact is the immigrants include a great number of unmarried men and women, the latter supplying servants to the Greeks, Armenians, Europeans, Levantines, and Jews, in Smyrna.

Constantinople and Smyrna use up a large part of the Hellenic population. Were the immigrants addicted to agriculture they would rapidly occupy the country; but the extension of agriculture by Greeks has chiefly been effected by rayahs. Just as is the population of Constantinople and Smyrna, so are the others, coffee-house and wine shop-keepers, chandlers, shop-keepers, stall-keepers, oven-keepers, shopmen, shoemakers, boatmen, servants, mechanics; and the women are servants and water carriers.

It is a singular fact that the largest Greek cities (for such we may call the Greek quarters of Constantinople and Smyrna) are in Turkey, and there are more large populations there than in the Hellenic kingdom and in a better condition. There too, in those cities and in Scio, we may seek rather than in Syra and in Athens for what Greek enterprise and commerce can do under favourable circumstances.

9th. *The bad Turkish Government.*—A long list has been drawn up of the defects and abuses of the Turkish Government, and many

of them can be proved. A Government that farms its land tax, as the Turkish Government does, inheriting the system of thousands of years, must leave its subjects to be robbed and oppressed by the rabble of tithe farmers' dependents, and without any efficient power of protection; and this system will still subsist for some years, though the Government is trying to put a stop to it, and has abolished it in Roomelia. We have suffered from it in India.

Brigandage is another alleged evil, and must be a real one, for it is always to be found in thinly-peopled and mountainous countries, as in the south of Europe. Under the name of gang-robbery it occurs in India.

Without entering into details, we are safe in assuming for Turkey a defective Government, very far behind hand in comparison with our own; but as comparisons are relative, we must pause before we also assume that the Government is so bad as not to comply with some of the essentials of orderly government, or inferior to that of neighbouring countries.

Good practical evidence is afforded by the inhabitants of Turkey and the neighbouring countries. There are no emigrants from Turkey, while Turkey receives immigrants from Persia, Russia, Wallachia, Austria, Greece, and the Ionian Islands and Malta.

The Greeks, who have no natural affection for the Turks, and who lose no opportunity of abusing them, or of conspiring for their downfall, leave Greece in annual shoals to settle and marry in Turkey.

The conclusion is that Turkey must be a fair average country as compared with Eastern Europe and Western Asia.

Having considered the allegations of those affirming the extinction of the Turks, it may be as well to consider some real and apparent causes, unfavourably affecting the population.

1st. POLYGAMY.—This is no efficient cause for the extinction of a race, for so many races have, from the earliest historical period, practised polygamy. Still it may exert an unfavourable influence.

What is commonly understood in Europe as the harem or seraglio system, undoubtedly does; it prevailed very largely in Turkey until the reform, and is now diminishing. The harem of the Sultan is, however, an exceptional establishment.

When pashas were made from slaves, and their career might at any moment be ended by the bowstring, the course was a short life and a luxurious one. Women were bought for sensual enjoyment and ostentation, as male slaves, horses, arms, jewels; but women were not only bought from such motives, but because, on the downfall of the head, they became the chief stays of the family; sometimes their jewels alone being saved when the palace was ransacked. The daughters of the pashas, looked down upon by fashionable

Circassians and Georgians as creoles, were lucky if they got married to their father's slaves.

The reform, in bringing safety for life and property, has abated polygamy and introduced a new state of affairs. Young ladies are married to young gentlemen, marriage settlements are made, and the household expenditure only allows the purchase of slaves for the wife. Thus the trade in Circassian and Georgian women has fallen off, and they are now bought for nurses, governesses, and companions, and only exceptionally for concubines.

The downfall of the feudal class has also diminished polygamy.

The poverty of the lower classes acts as an effectual check on polygamy, and the slaves of the middle and lower classes are negresses.

Polygamy has not been and is not now an influence operating on the main body of the nation, but it must be esteemed a cause acting on the upper and political classes.

Everything attests the non-vitality of this class; generation after generation has died off, and it is difficult to find a man in Constantinople of historical descent.

The body of the Ulema, protected and privileged, led quieter lives, and it is among them that longer descent is to be recognized.

Where polygamy is still practised it does not promote permanent increase of the population. The number of births is large, but the number of living offspring small. A gentleman of very high rank, who was travelling with his family, told me he had had above sixty children, but that only seven were living. This is an extreme case, as to the number of births, but it is not an extreme case as the number of living children.

The question arises, what law governs these results, and how far our future observations may enable us to reconcile them with physiological discoveries. The ovarian system of the female, according to these discoveries, points to a fecundity limited only by the natural epoch of gestation, and partial fecundation, resulting in miscarriage or abortion, may take place to a considerable extent. The ultimate limit is that of the total capacity of male fecundation, and although one woman may produce from several men, from successive unions, the results of polygamy appear to point out the limit of production of several women as being the limit of the one man.

A distinction too must be drawn between simple production of offspring and the propagation of a race, so as to maintain or increase it.

With regard to these considerations we have no evidence from history that polygamy has afforded a greater element of increase to populations than monogamy. Indeed one of the best-accredited instances of the increase of a population, namely, that of the French

Canadians, from 30,000 in 1754 to above 1,000,000 at the present time, is the case of a monogamous population.

So, too, comparing by our present information the monogamous populations of Europe with the partially polygamous populations of Turkey, Persia, and Hindostan, we have nothing to show that the latter are in modern times in a more favourable position for increase.

Permanent increase of a population appears to require an increase of area and of food within the limits of the natural law of fecundation.

The result indicated is that so far as polygamy is practised in Turkey, its influence on the increase of the population is unfavourable, but it is of itself a decreasing influence. It is alleged that polygamy acts unfavourably on the Jews in Turkey, but I have no information on that head.

2nd. UNMARRIED ADULTS.—The number of unmarried adults is large in Turkey. It includes the soldiers of the Nizam, or regular army enrolled for seven years, sailors, a large proportion of those engaged in transport as camel drivers, muleteers, &c., but particularly male servants in the large cities. The redif, or reserve, spending part of their time at home, can marry, and the servants marry when their means permit, but very often to liberated slaves of middle age. The real abstraction of unmarried adults among the Ottomans as compared with other nations cannot be established, but there is no evidence to show that it is really larger than in other countries of Europe; nor is there the element in Turkey of a celibatary clergy, or of any distinct celibatary class.

The proportion of unmarried adult females in Turkey is much larger than is popularly supposed; but its proportions to other populations cannot be established. Thus in England the large class of female servants is generally unmarried, and this is so in Turkey. Among the higher classes the number of unmarried females attendant on the wife is very great, and including persons having the social standing of governesses and companions in England.

Although slaves are commonly enfranchised after a time, yet the residence of a number of unmarried adult women and girls, slave and free, in one house, undoubtedly exercises most unfavourable influences, and these perhaps are among the primary causes of the infantine mortality in the higher and middle classes, namely the sexual irregularities of females.

It may be observed, that, on the marriage of white women-slaves a period of miscarriages and still-births sometimes intervenes before the birth of children that live and grow up. This circumstance points to a derangement of the system which does not prevail in the countries of Europe which are exempt from such vices. The existence of these vices throughout the East is known and recognized,

and it is stated that since the Crimean War they have extended among the women of Paris.

So far as they exist among the Christian women of Turkey, their effect is not so serious, for the reason that the women being commonly married at from 18 to 24, there is not the same duration of the evil as in women from the harems of the Turks, who are married at from 25 to 35 on emancipation by their mistresses.

There is no reason to suppose the negresses to be under better influences than the white slaves. They, too, are sometimes married late in life, and although the negro population in Turkey is not under favourable vital influences, yet much must be attributed to climate. Although very fine negroes are to be seen of Turkish birth, as black Zebecks above six feet high, it is rare to see a large negro family. The families generally consist of three or four infant negroes, and the adult children are only one or two.

3rd. Divorce.—In connection with the last head, though of very slight operation, is divorce. Although divorce can be very readily accomplished, yet in most cases the single wife of the man's youth is his companion till old age—the legal facility of divorce not necessarily slackening the tie, because other influences counteract it. Divorces in many cases amount to a separation by mutual consent, and on reconciliation, the parties remarry.

Divorces particularly take place among young people, for as it not unfrequently happens that parties have not known each other, or not known enough of each other before marriage, they afterwards disagree, and readily separate. The woman remains unmarried for some years, perhaps during her life, and her period of child-bearing is interrupted in the time of her maturity.

There is, too, an unexamined question whether these women who have had more than one husband produce more children; and those having the capacity of perfect and permanent reproduction, than a like number of women having only one husband. The probability is, that the production of women having only one husband will, on the whole, be greater.

There is, likewise, the question how far in any particular race the secondary or later offspring may be fouled or debilitated, as the result of the prior connection, in conformity with those as yet obscure physiological laws, of which Count Strzlecki has pointed out the serious influence in the case of the Tasmanian aborigines, and which I adduced as one cause of the destruction of the Polynesian tribes in a discussion before this Society on New Zealand.

4th. Town Populations.—The proportion of the town to rural populations in Turkey has been referred to by Kiepert, and he has attempted to apply the proportion of the Spanish population to Asia Minor, but there are no data on the subject. If a comparison is

to be made by the aid of Spain, then it would appear most likely that the town population of Turkey is in large proportion.

The town population of Asia Minor is undoubtedly very large, and Constantinople is also greatly supplied from Asia Minor.

All observations point, and the burial grounds in the inscriptions on the family graves appear to give countenance to the conclusion, that the large and crowded town populations in three or four generations become extinct.

The luxurious life of the higher classes, and the really sedentary life of all—high and low, men, women, and children—must act very unfavourably. In Asia Minor, the women of the towns take very little exercise as compared with those of Constantinople.

I believe the town population of Western Asia Minor to be equal to the rural population, or something in that proportion; and this is the conclusion I come to, as well in general as from observing the villages around the cities in various parts of the country.

If this be true, and if the proportion of rural to town population be less than hitherto supposed, it will materially reduce the estimates of the population of Asia Minor, and this from a personal comparison with his Excellency Ahmed Vefik Effendi, who was engaged on the cadastral survey of a portion of the country some years ago, I believe to be the case.

As we become better acquainted with the population of Asia Minor, we reduce the old exaggerated estimates of the town population, and also of the rural population; or rather we ascertain the the present and true state of the case; but not making corrections for the former exaggerations, we are apt to believe the old statements to be likewise true, and arrive at the conclusion that the population has largely diminished.

5th. MIXTURE OF RACES.—It is possible, and most probable, that the mixture of races has exercised an unfavourable influence on the Ottomans. The upper and middle classes were formerly largely intermarried with Georgians, Circassians, and Greek slaves and captives. As already mentioned the perpetuation of these mixtures was not assured, and where families are found apparently the result of such mixtures, they will be found in reality to be composed chiefly of one element. This is the case even with the great apparent exception, the Imperial House of Osman. For some generations it has been maintained by Caucasian unions, with no exception of an Ottoman union, and has only a most distant trace of Ottoman blood.

These mixed unions with the Caucasians and Greeks have now ceased, except in the cases of Caucasian concubines, and of Christian girls who embrace Islam for the sake of the superior advantages of a Turkish marriage, as compared with the slavery of being the wife of a Christian. The Turks are thereby so far in a sounder position, and

one more favourable for the maintenance and extension of their race than formerly.

The mixed races in Turkey include—

Turko-Caucasians.
Turko-Mulattos.
Levantines.

There is no evidence that any of these can maintain itself; but on the contrary each is crumbling away, leaving the pure races, as the—

Turks.
Jews.
Armenians.
Asiatic or Iberian Greeks.
Hellenic Greeks or Albanians.
Koords, and
Gipseys.

6th. Decline of the Feudal Aristocracy.—One of the leading measures carried out by the great reformer, Sultan Mahmood, was the reduction of the feudal and military aristocracy, which kept the empire in confusion in every direction, and rendered the Imperial Government powerless.

Hence may be seen, in every part of Turkey, fine mansions and establishments abandoned, which are eagerly pointed to as proofs of the decline of the Turkish race; but as very few of the chiefs or families were cut off, there is only a displacement of the population.

Although for a time local authority and administration were weakened, roads were neglected and brigandage increased in some places, yet the gain to the commonwealth has been considerable, and the central government is gradually exercising its functions with greater efficiency.

7th. Decline of the Ulema.—The Ulema, the clerical and judicial body, was, before the reform, accumulating wealth, diminishing the area of taxation by its privileges, and reducing the active and productive force of the country. Thousands of students, or softas, maintained by the hospital funds, or soup kitchens, constituted a turbulent militia for the Ulema, ever ready to create tumults in the great cities in obedience to their behests, and in resistance to reform.

The Ulema, by a variety of operations, has been brought within wholesome bounds.

When life and property were insecure, in conformity with a like system in Europe during the feudal ages, a man devoted an estate to pious uses. Suppose this estate produced 100*l.* a-year, 5*l.* was perhaps applied to the pious use of burning a lamp in a mosque, and the estate was left in the hands of the donor as the administrator; but

as the property became tax-free and inalienable, he profited every way, The Ulema, however, became the ultimate possessors on the extinction of male heirs.

This circumstance affords curious corroboration of the unfavourable influences I have referred to as diminishing the permanent vitality of the upper and middle classes. These fiefs have fallen in in large proportions from the failure of heirs, so that the Ulema acquired large surplus funds of late times, and so confident were they in their operations, according to their experience, that they would advance a large proportion of the value of a freehold to induce the proprietor to make it *Vakoof*. Of late the rates had risen, and I was assured that on a stone house worth 1,000*l.* in Constantinople, and letting for 50*l.* or 60*l.*, 800*l.* would be given with the reserve of a quit-rent of only 5*l.* a-year.

This is a kind of evidence, though not a conclusive one, or a fair average, of the value of reversions; but better evidence of the little duration of families of the better classes in the good old times.

Now a change has set in, and persons holding *Vakoof* properties are seeking to convert them into freeholds, and are willing to pay one hundred years' purchase, or more, to redeem the small quit-rents. The Government has, therefore, in preparation a measure, understood abroad to be a confiscation of church lands, but which is in reality an enfranchisement of ecclesiastical tenures; but in Turkey, the surplus in this department, under the new administration, is paid to the State and not to the Church.

With regard to *Vakoof* lands appropriated to the maintenance of colleges, schools and mosques, some have been let long since on perpetual leases at old rents, others have been fraudulently leased, and, in consequence of the alteration of the value of money, the recipients are now in many places reduced to poverty, and I have seen colleges without students, and some without either students or professors, and the chambers untenanted.

The decline of the unreformed ecclesiastical colleges is throwing the education of the upper and middle classes into the new colleges founded by the Government.

The establishment of new criminal courts and tribunals of commerce is superseding the legal jurisdiction of the old functionaries, and reducing their fees.

Thus the judicial career, formerly independent of the Government, and in the disposition of the heads of the Ulema, is no longer so remunerative, and as in the Government departments and councils, muftis and other educated members of the Ulema are now employed, many become directly dependent on the Government as employees.

The number of students diminishes necessarily under such a state of affairs, and they are generally drawn from a lower class of

society, while the sons of the old members are brought up in a more liberal way, like the rest of the community, and under the auspices of their relatives and the Government, they monopolize the best places, leaving nothing good for the common mass.

Considered in reference to the subject under investigation, all these operations are favourable rather than otherwise to the increase of population, though their decaying medressehs and establishments are regarded by the casual observer as a proof of its decline.

This is not so; nor is there either any evidence of the decline of Islam. By a better administration of the funds for pious uses, the mosques in the large cities are now being put under repair, more efficient than they have received for a century.

7th. Decline of Provincial Capitals.—Generally speaking the provincial capitals exhibit proofs of decline, the large palaces and mansions being abandoned, or let out in tenements to the working classes.

This has been already referred to, and is one result of the reforms. The governors now have less means of acquiring wealth, and are not allowed to keep up their former retinues. The local aristocracy, who durst not visit the metropolis for fear of leaving their fortunes or their heads there, now naturally resort to Stambool, as do their followers, to spend their money or to seek places and employment.

8th. Period of Infantine Mortality.—No laws of hygiene are observed by the population, Mussulman, Jew, or Christian, though there may be diversities in their several modes of proceeding. Medical science does not exist, nor are there medical practitioners: the barber is the surgical practitioner for men; the chemist the medical practitioner. For the women, in addition, there are the midwife, the conjuror, the astrologer, and the man or woman, saint or sinner, who cures by charms. Among the Christians, generally speaking, payment of a medical man is considered a useless waste of money. In a city of fifteen thousand people, the hospital is attended by the chemists in rotation. Of course European practitioners are to be found distributed throughout Turkey, being vagabond Europeans, or illiterate Armenians and Greeks with hats on; the hat here answering to the gold-headed cane of the last century. These persons acquire their knowledge of medicine in Turkey itself, at the expense of the population; but they are for the most part chiefly engaged in some commercial speculation.

The few educated practitioners are monopolized by the European colonists; and those trained by the Ottoman Government are not yet sufficient to supply the army or the navy.

The only hygienic or medical influence for infants, Mussulman or Christian, is superstition, and the children drop off in numbers;

but the Turkish boys more particularly, as they are stuffed with sweetmeats, and their appetites pampered, regardless of consequences.

The boys of rich Armenians suffer to a less extent, and the children of the Greeks get on better, as they are reduced by the parsimony of their parents to a vegetable diet. This is compensated in the summer by a reckless consumption of fruits, not sweet but unripe, and of melons, cucumbers, and uncooked vegetables.

This course thins off the whole population, Mussulman and Christian, by instalments, the Greeks having the better of it for a time, and the Turks suffering the most in the periods under 2 and 7 years of age, but in the end establishing the balance pretty equally between Mussulman, Jew and Christian. The adult Mussulman feeds better and abstains generally from strong drinks; the Armenian feeds better, but occasionally drinks; the Jew is sparing in diet and temperate in drink, but cramped in a dirty dwelling; the Greek lives less liberally and occasionally drinks spirits.

There is, indeed, no evidence that one class of the population is in a permanently better state than another.

We may now usefully examine another portion of the subject, namely, such facts as are opposed to the doctrine of a decline of the Turkish race.

1st. That the Turks form a race, and the men are well-formed and athletic, as the army raised by conscription shows; for it is equal in this respect to any army in Europe.

2nd. That the children bear a fair proportion to adults, and many families include several sons or daughters.

3rd. That the race must have in it the elements of increase, for the present population of millions has increased in five centuries from hundreds of thousands, or perhaps only scores of thousands of original settlers.

4th. That the Ottoman population has in the same period increased beyond the Albanian, Armenian, or Greek population, and that there is no evidence that other populations have increased during that period in a greater proportion than the Turkish.

5th. That the evidence of European travellers, who have visited Turkey in the last three centuries, as collected by Kiepert, does not show that the Turkish population was formerly greater, or has since declined.

6th. That the settled Turkish population does not become nomad, but that the nomads recruit the Turkish population.

7th. That there is no emigration of the Turks in consequence of the country affording a fair field for industry, and that for the like reason, and as a testimony of the relative position of Turkey with regard to other countries there is a large immigration. This includes—

Crim Tartars, or Turks of the Crimea, now settled in the Dobruja of the Danube.

Negroes distributed over the empire.

Circassians of the recent immigration.

Wallachians.

Greeks.

Turcomans from Turkestan.

Of these populations the Mussulmans recruit the Turks, as do likewise the Koords and Arabs.

The next great head of inquiry is the alleged increase of Greeks, which is a statement popularly received. Mr. Blunt's assertion of the increase of the Greeks in Smyrna has been already examined.

1st. *Increase of Greeks.*—This is large, in consequence of the deplorable state of Greece and the happier condition of Turkey, and a great number of immigrants pour in.

These immigrants consist of two classes,—Permanent settlers and temporary sojourners, which latter come principally from the poor islands for a season, or for several years, to accumulate a sum of money and return home. Some, as the Samians, migrate simply for harvesting, as Irish labourers did at home.

It has been already explained that the Greek immigrants and settlers add little to the rural population of the country.

There is no evidence that the increase of the rayah population is large.

The increase of Greek Christians is an increase by immigration, and not by natural increase, and is not a fact capable of statistical comparison with the movement of the Turkish population.

2nd. *Increase of Greek Houses.*—This is a fact which strikes all travellers who visit the Greek quarters. It is a necessary consequence of the improved political condition of this portion of the population, which was badly housed, whilst the Mussulman population was sufficiently housed.

The increase, however, equally applies to the Armenians and the Jews, and consequently is neither a Greek fact, nor a Christian fact.

What will be the ultimate result of the Greek immigration it is impossible absolutely to determine, but so far as it brings about intermarriage between the Hellenics and the rayahs of Asia, the history of the past is unfavourable to the maintenance of the imported blood.

Although the population is called Greek, there can be no question, as an ethnological fact, that the Greeks have been long since extinct, and that the so-called Greeks of Europe are of Albanian descent, and as to the so-called Greeks of Asia Minor they are descendants of the aborigines, and instead of being of Indo-European stock, are most likely Turanian. Whether such races can form a permanent mixed

population is exceedingly doubtful. In the classic period the Greek immigrants became extinct by intermarriage, and there is no evidence that the Slavonic and Albano-Greek immigrants since the Turkish occupation have perpetuated themselves.

The evidence to be deduced from the facts accumulated by Kiepert is, that the Greek population of Asia Minor has for the last three centuries been stationary.

With regard to the *Armenians*, something has already been said incidentally. Besides the colony at Constantinople, they have some large colonies in Asia Minor, but, generally speaking, they are distributed in very small bodies, as the details in Kiepert's memoir show.

With regard to the *Jews*, they have been mainly stationary, so far as the same evidence shows; or, if anything, with a tendency of late to increase. If the facts with regard to the Jews be anti-mussulman, at any rate they are not in favour of the Christians.

With regard to the *Levantines*, the facts are in favour of their progressive extinction, as is the doom of all mixed races. The chief part of the English Levantines are derived from emigrants of not more than eighty years back, but there is one family of two centuries' date. Of the Levantines generally it may be said, they are Greeks in blood and language, and commonly in religion, except so far as they are of French or Armenian half-caste blood, most of the members of which are Roman Catholics.

The prospect of the increase of Christians in Asia Minor depends on the advancement of the Armenians in the not very favourable country of Armenia, and of the small colony of Turkish-speaking, or rayah Greeks, in Asia Minor. They ought to profit very much by the removal of civil and religious disabilities, to the great benefit of the empire at large.

It may be useful, by way of appendix, to add some tables founded on the facts collected by Kiepert, in the memoir appended to his Map of Asia Minor, and which included every estimate of population made by European travellers for two centuries and a half.

Table I, I have compiled so as to show the towns with a mixed population, in which Turks predominate.

This is altogether exclusive of pure Turkish towns.

This table shows the total population, with the proportion of Greeks, Armenians and Jews, distinguished, and how inconsiderable these are generally.

The total number is 156, of which only a small proportion is under a population of 3,000.

The chief Greek colonies are:—

Smyrna	80,000	Aïdin	4,000
Booldoor	5,000	Konieh	4,000
Broossa	5,000	Keurk Ahgaj	4,500

The chief Armenian colonies are :—

Wan	10,000	Ismid	5,200
Smyrna	8,000	Angora	4,000
Merash	10,000	Gurun	4,600
Arabkir	6,000	Ersinjan	4,000

The chief Jewish colony is—

Smyrna	10,000

Table II shows the number of Greek towns. These are sixteen in number, of which only Aivali is considerable. Most of these towns include some Turks.

Table III shows the number of Armenian towns, four in number. This of course is exclusive of towns in Armenia.

Table IV shows the comparative population at various periods, of thirty-five towns, being all for which there are materials available.

There will naturally be great discrepancies in these estimates, the Turkish population being the residuum after the others are deducted. Some of the apparent discrepancies are, however, real fluctuations dependent on the action of the plague, or on changes of trade.

Broossa shows a tolerably steady population, so do Angora, Afioom Kara Hissar, Kyutahiah, Mardin.

There is an apparent increase for Magnesia, Smyrna of late years, Berghamo, and Dardanelles.

No inference can fairly be drawn from these few figures.

Trebisond, Wan, and Erzeroom have suffered by war.

There are, however, some broad facts to be recognized and some safe conclusions to be deduced, and that is, that the relative population of Greeks, Armenians, and Jews, has always been small in proportion to the Turkish, and that there is no evidence of any considerable or lasting augmentation of the subject populations.

For Broossa we have estimates for two centuries. These represent Greeks and Jews as stationary. The Armenian population has not probably diminished as is represented. The estimates as to the Armenians are commonly very loose.

In the large city of Angorah the Greeks are evidently few and the Armenians considerable.

The same in Kyutahiah.

For Smyrna we have a wide and wild range of figures. In the end of the seventeenth and beginning of the eighteenth century, the population was reduced by earthquakes and plague; but it appears to have been generally a city of 100,000 people.

The movement of the Greek population has followed the general movement. Before the Greek war it rose to 40,000, but is repre-

sented by Hartley as having fallen to 15,000 in 1826 on the close of the war.

Except during the period of Smyrna's decline, the Armenian population bears a general character of uniformity. The estimate of Tavernier in 1630 of 8,000 Armenians, is the present estimate of 1864.

For the Jews the fact is analogous; 7,000 in 1630; 8,000 in 1653; 10,000 in 1864.

Tables I and IV show that for the last three centuries at least the Jewish and Christian populations have been distributed among the Turks in very small groups, so that there must have been safety for them, and they were not exposed to be constantly massacred, as is vulgarly supposed. Indeed the reports of ancient travellers represent the Christian women as richly dressed, and the Christians as rich.

The value of the evidence I have employed, as collected by Kiepert, can be readily estimated. A traveller is generally quartered in the house of a Greek, commonly the official head of the nation, millet bashi, or khoja bashi. He can answer pretty well as to the number of Greek houses, and on such occasions he does not put it down too low. He knows the number of Jewish and Armenian houses, but here his evidence is not so safe. As to the Mussulman population, he can give nothing reliable.

Injijian, an Armenian writer, gives some evidence as to the Armenians, but it is very old.

I have in some cases introduced observations or corrections of my own.

The evidence as to the Christians is as fair as can be obtained, and this shows the small proportion of the Christian population, and that its relative proportion to the Mussulmans is pretty constant.

TABLE I.—*Towns in Asia Minor with a Mixed Population in which Turks predominate.*

Name.	Population in *Thousands.*				Authority and Notes.
	Total.	Whereof are			
		Greeks.	Armenians.	Jews.	
Smyrna	180,	80,	8,	10,	Hyde Clarke
Broossa	80,	5,	5,	2,	—
Angora	54,	1,	4,	·5	Ainsworth, Hamilton
Kyutahiah	45,	1,	2,	—	—
Afioom Kara Hissar	45,	·7	2,	—	—
Erzeroom	40,	1,	8,	—	—
Wan	40,	—	10,	—	Southgate
Aidin	40,	4,	·2	2,	Hyde Clarke
Magnesia	40,	5,	2,	2, ?	Kiepert, Hyde Clarke
Tokat	35,	1,	10,	·2	—
Amasia	35,	·7	4,	—	—
Trebisond	30,	1,	2,	—	—
Sivas	30,	·1	6,	—	—
Konieh	30,	4,	·4	—	—
Kastambool	30,	·6	2,	—	Wronchensko
Oorfa	25,	—	1,	·5	500 Syrian Christians
Booldoor	25,	5,	—	—	—
Adana	20,	1,	1,	—	—
Ooshak	20,	·7	·2?	—	—
Tussiyah	20,	·2	3,	—	Ainsworth, &c.
Ismid	20,	1,	5,	—	—
Kaisarieh	20,	1,	2,	·2	—
Diarbekir	20,	·3	2,	·3	600 Chaldeans
Mossool	20,	—	—	1,	5,000 Syrians, &c.
Sifeh	20,	—	·7	—	—
Merash	20,	—	10,?	·2	—
Changri	18,	·1	·08	—	Ainsworth
Safaranboly	16,	1,	·2	—	,,
Yusgat	15,	·2	3,	—	—
Mersiyan	15,	—	3,	—	Ainsworth
Berghama	15,	1,	·2	·1	Arundell
Tireh	15,	2,	—	—	Hyde Clarke
Nev Shehr	15,	4,	·3	—	Ainsworth
Mardin	15,	—	2,	·2	3,000 Chaldeans
Bitlis	15,	—	3,	—	Layard
Ersinjan	15,	—	4,	—	—
Aintab	15,	—	2,	—	—
Egin	14,	—	3,	—	Brant
Shabhaneh Karahissar	13,	·2	2,	—	,,
Behesnek	13,	—	2,	—	Ainsworth

TABLE I.—*Towns in Asia Minor with a Mixed Population—Contd.*

Name.	Population in *Thousands.*				Authority and Notes.
	Total.	Whereof are			
		Greeks.	Armenians.	Jews.	
Antakia	12,	·5	·1	—	—
Baluk Hissar	12,	·1	1,	—	Kiepert, &c.
Ak Hissar	12,	1,	·1	·1	Newbold, &c.
Keurk Aghaj	12,	4,	1,	—	—
Alashehr	12,	3,	—	—	Newbold, &c.
Adalia	12,	2,	—	—	Spratt
Dardanelles	11,	1,	·3	·5	Kiepert
Melatiyah	11,	—	3,	—	Ainsworth
Karaman	10,	—	·5	—	—
Beyshehr	10,	1,	·4	—	Wronchensko
Isbarta	10,	2,	·2	—	—
Boli	10,	2,	·5	—	—
Sivri Hissar	10,	—	1,	—	—
Ada Bazar	10,	2,	2,	—	Wronchensko
Durgudlu Kassaba	10,	2,	·3	·5	Hyde Clarke
Skala Nova	10,	2,	·1	·1	Hyde Clarke
Denislu	10,	1,	·2	—	—
Gumush Haneh	10,	1,	·4	—	—
Diwirji	10,	—	2,	—	Ainsworth
Tarsus	10,	·5	1,	—	—
Arabkir	10,	—	6,	—	—
Kharpoot	10,	—	2,	—	Brant
Mooghla	9,	·1	—	—	—
Gurien	9,	—	5,	—	—
Injessoo	8,	2, ?	2, ?	—	Ainsworth
Samsoon	8,	1, ?	1, ?	—	—
Moosh	8,	—	2, ?	—	—
Akshehr	8,	—	1,	—	—
Odemish	8,	3,	·2	—	Hyde Clarke
Baindir	8,	1,	·1	—	,,
Muhalich	8,	3,	·5	—	—
Milassa	8,	1,	·07	·07	Hamilton, &c.
Koolah	7,	1,	—	—	—
Dilejik	7,	—	·1	—	Poujoulat
Nijdeh	7,	1,	·2	—	Hamilton, &c.
Naslu	7,	1,	—	·1	Hyde Clarke
Bafirah	6,	·5	·2	—	Hamilton
Artwin	6,	—	2,	—	—
Guerdis	6,	1,	—	—	Wronchensko
Edremit	6,	1,	—	—	Kiepert

TABLE I.—*Towns in Asia Minor with a Mixed Population—Contd.*

Name.	Population in *Thousands.*				Authority and Notes.
	Total.	Whereof are			
		Greeks.	Armenians	Jews.	
Boghasshehr	6,	·6	·2	—	Kiepert
Voorlah	6,	1,	·1 ?	—	—
Almalu	6,	—	·5	—	—
Ajiman	5,	—	1,	—	Ainsworth
Soma	5,	·5	—	—	—
Fokia	5,	2,	—	—	—
Alaya	5,	2,	—	—	Wronchensko
Oluboorlu	5,	·3	—	—	Arundell
Ilijah	5,	—	1,	—	Ainsworth
Svort	5,	—	·5	—	Brant
Erekli	5,	—	·2	—	500 Chaldeans
Sais	5,	—	·5	—	Chesney
Vezir Keupru	5,	·1	·2	—	Hamilton
Niksar	5,	·1	·6	—	Brant
Khoshal	5,	—	·7	—	,,
Palu	5,	—	2,	—	—
Kalehjik	4,	—	·3	—	Ainsworth
Kenik	4,	·5	·4	—	Elliott
Menimen	4,	1,	·1	—	—
Arghana	4,	—	1,	—	—
Sokia	4,	1,	·1	—	—
Sinope	4,	1,	—	—	Hamilton
Bairamich	4,	·1	·1	—	Kiepert, Turner
Akserai	4,	—	·07	—	Ainsworth
Kiressun	4,	·7	·2	—	Kinneir
Arghana Maden	4,	1,	·8	—	Brant
Suwerek	3,	—	·6	·02	Fletcher
Bartan	3,	·1	—	—	Ainsworth, &c.
Simaw	3,	—	·1	—	Wronchensko
Yeni Shehr	3,	—	·2	—	Poujoulat
Bayazid	3,	—	·9	—	Smith
Gemerik	3,	—	·3	—	Von Moltke
Boodroom	3,	·5	—	—	—
Chandarlik	3,	1,	—	—	Kiepert
Shugut	3,	1,	—	—	—
Ineboli	3,	1,	—	—	—
Bash Gelembeh	3,	·1	—	—	—
Tripoli	3,	·5	—	—	Hamilton
Kyeban Maden	2,	·1	1, ?	—	—
Tavshanly	2,	—	·1	—	Keppel

TABLE I.—*Towns in Asia Minor with a Mixed Population—Contd.*

Name.	Population in *Thousands.*				Authority and Notes.
	Total.	Whereof are			
		Greeks.	Armenians.	Jews.	
Sapenje	2,	·07	·1	—	Ainsworth
Khonas	2,	·1	—	—	Kiepert
Geunen	2,	·2	—	—	—
Hini	2,	—	·7	—	Brant
Keinak	2,	—	·1	—	,,
Ladik	2,	—	·07	—	Badgor
Surmaneh	2,	1,	—	—	Fontanier
Yoorkoop	2,	·5	—	—	—
Geiweh	2,	·5	—	—	—
Ineh	2,	·2	·1	—	Kiepert, Turner
Lapsaki	2,	·2	—	—	Kiepert
Lefkeh	2,	·4	—	—	Wronchensko
Mermereh	2,	·4	—	—	,,
Baiwad	2,	·2	—	—	Hamilton
Charshembeh	2,	·2	·2	—	—
Bulathaneh	2,	·5	·2	—	Fallmerayer
Ardamid	2,	—	·7	—	Injijian
Toot	2,	·2	—	—	Hamilton
Nissibin	1,	—	—	—	60 Jacobites
Toprakkaleh	1,	—	·5	—	Kock
Amediah	1,	—	—	·2	100 Syrians
Beilan	1,	—	·5	—	E. Smith
Sarra	1,	—	·7	—	—
Kemer	1,	·2	—	—	Kiepert, Wronchensko
Eregli	1,	·5	—	—	—
Kidros	1,	·8	—	—	Ainsworth, &c.
Cherkesh	1,	·1	—	—	Wronchensko
Boklu	1,	·5	—	—	—
Adeljiwas	1,	—	·1	—	Brant
Dalia Bazarkeui	1,	·1	—	—	Wronchensko
Hekim Khan	1,	—	·2	—	Brant
Boghaslayan	1,	—	·7	—	Aucher
Geredeh	1,	·2	—	—	—
Gerseh	1,	·1	—	—	Hamilton
Bergas	1,	·4	—	—	—
Isnik	1,	·2	—	—	—

TABLE II.—*Greek Towns.*

Name.	Population in *Thousands.*	Authority.
Aivali	25,	Kiepert
Gemlik	6,	1,500 Turks?
Erdek	6,	Said to have Armenians and Turks
Lacheta	6,	1,000 Turks
Mudania	5,	,,
Cheshmeh	5,	1,000 Turks
Meïs	5,	100 ,,
Sileh	5,	Hamilton
Abullioni	2,	800 Turks
Seidekeui	2,	Some Levantines
Levisi	2,	Schönborn
Risah	1,	100 Armenians
Chirkinji	1,	400 Turks
Venikeui	1,	Kiepert
Erenkeui	1,	,,
Kadikeui	1,	Wronchensko

TABLE III.—*Armenian Towns.*

Name.	Population in *Thousands.*	Whereof are Turks.
Hajin	9,	150
Garamush	2,	—
Malagob	1,	500
Enderas	1,	250

TABLE IV.—*Comparative Population at Various Dates.*

Place and Authority.	Year.	Population in *Thousands.*				
		Total.	Whereof were			Other Races.
			Greeks.	Armenians.	Jews.	
Dardanelles—						
Spon	1675	4,	—	—	some	—
Dallaway	1794	10,	—	—	1,	—
Turner	1816	10,	1,	·7	·4	—
Wronchensko	'35	6,	·5	·4	some	—
Kiepert	1842–54	11,	1,	·3	·5	—
Lapsaki—						
De la Mottraye	1710	1,	—	—	—	—
Choiseul Gouffier	'85	1,	—	—	—	—
Turner	1816	1,	·2	—	—	—
Kiepert	1842–54	2,	·2	—	—	—
Muhalich—						
Pococke	1739	—	2,	1,	—	—
Turner	1816	6,	3,	·7	—	—
Wronchensko	'35	3,	2,	—	—	—
Hamilton	'37	8,	3,	—	—	—
Mudania—						
Niebuhr	1767	7,?	5, ?	—	—	—
Turner	1816	5,	2,	—	—	—
Broossa—						
Spon and Wheler	1675	52,	few	few	1,	—
Niebuhr	1767	110,	4,	6,	2,	—
Sestini	'79	50,	2,	2,	1,	—
Browne	1802	60,	3,	7,	2,	—
Turner	'16	70,	4,	7,	2,	—
Prokesch	'26	70,	4,	10,	2,	—
Texier	'34	75,	3,	5,	2,	—
Burgess	'34	90,	4, ?	5,	1,	—
Wronchensko	'35	70,	3,	5,	—	—
Poujoulat	'37	100,	5,	3,	2,	—
Angorah—						
Tournefort	1701	45,	—	—	—	—
Scott-Waring	1805	25,	—	—	—	—
Gardanne	'07	30,	—	9,	—	—
Kinneir	'13	20,	—	7,	—	—
Aucher	'34	30,	6,	7,	·5	—
Wronchensko	'34	45,	2,	5,	—	—
Chesney	'36	15,?	—	—	·2	5, Christians
Hamilton	'36	30,	—	—	·6	9, ,,
Poujoulat	'37	24,	·7	3,	·5	—
Ainsworth	'38	54,	1,	4,	·3	—
Afioom Kara Hissar						
Niebuhr	1767	50,	—	2,	—	—
Olivier	'97	60,	—	—	—	—
Kinneir	1813	60,	·7	2,	—	—
Aucher	'35	50,	—	2,	—	—

TABLE IV.—*Comparative Population—Contd.*

Place and Authority.	Year.	Population in *Thousands.*				
		Total.	Whereof were			Other Races.
			Greeks.	Armenians.	Jews.	
Kyutahiah—						
Niebuhr	1767	60,	1,	6,	—	—
Olivier	'97	50,	·5	5,	—	—
Richter	1816	60,	5, ?	10, ?	—	—
Kephal	'29	45,	2,	2,	—	—
Wronchensko	'34	40,	2,	2,	—	—
Poujoulat	'37	70,	1,	2,	—	—
Ak Hissar—						
Spon and Wheler	1675	5,	—	—	—	—
Turner	1816	15,	2,	·2	·05	—
Elliott	'20 ?	9,	2,	·2	—	—
Prokesch	'26	24, ?	1,	·3	—	—
Arundell	'26	7,	1,	·1	—	—
Smith	'30	5,	1,	·1	—	—
Burgess	'34	7,	1,	·1	—	—
Newbold	'46	12,	1,	·1	—	—
Berghamo—						
Pickering	1673	3,	—	—	—	—
Turner	1816	8,	2,	·1	·1	—
Elliott	'20	24, ?	3,	·5	·1	—
Arundell	'26	15,	1,	·2	·1	—
Newbold	'46	15,	—	—	—	2, Greeks and Armenians
Manissa (Magnesia)						
Wheler	1675	12,	—	—	—	—
Turner	1816	10,	3,	1,	—	—
Elliott	'20	30,	4,	2,	—	—
Arundell	'26	—	4,	2,	·5	—
Smith	'30	48,	4,	2,	·7	—
Wronchensko	'35	18, ?	3,	·5	·1 ?	—
Schubert	'36	80,	4,	2,	·5	—
Kiepert	1841–54	50,	—	—	—	—
Smyrna—						
Tavernier	1630	90,	15,	8,	7,	—
D'Arvieux	'53	90,	13, ?	7,	8,	—
Spon	'76	55,	9,	—	12,	—
De la Mottraye	'99	24,	8,	·4	1,	—
Tournefort	1701	27,	10,	·2	2,	—
Thompson	'33	28,	10,	·3	2,	—
Paul Lucas	'15	100,	20,	8,	—	—
Pococke	'40	100,	8,	2,	6,	—
Choiseul Gouffier	'76	100,	21,	8,	10,	—
Stuart	'88	130,	20,	8,	10,	4, Franks or Levantines
Van Kinsbergen	'90	110,	24,	7,	12,	—
Tancoigne	'11	105,	25,	10,	5,	5, Franks
Beaujour	'14	120,	40,	6,	12,	—
Jowett	'18	120,	40,	7,	10,	—

TABLE IV.—*Comparative Population—Contd.*

Place and Authority.	Year.	Population in *Thousands.*				
		Total.	Whereof were			Other Races.
			Greeks.	Armenians.	Jews.	
Smyrna—contd.						
Elliott	1820 ?	120,	30,	8,	10,	5, Franks
Hartley	'26	75,	15,	8,	8,	—
Wronchensko	'34	110,	40,	10,	5,	5, Franks
Chesney	—	130,	30,	7,	12,	—
Reinelt	1839	140,	48,	10,	8,	15, Franks
Ross	'44	150,	60,	10,	10,	25, „
French Consul	'49	138,	62,	10,	5,	13, „
Hyde Clarke	'64	180,	80,	8,	10,	—
Skala Nova—						
Thompson	1733	10,	3,	·4	—	—
Turner	1816	15,	4,	·05	·2	—
Wronchensko	'35	6,	1,	·05	·1	—
Hyde Clarke	'64	10,	2,	·05	·1	—
Konieh—						
Niebuhr	1767	60,	·2	·1	—	—
Wronchensko	1834	30,	—	—	—	—
Karaman—						
Olivier	1797	7,	—	·5	—	—
Kinneir	1813	15,	—	—	—	—
Wronchensko	'34	7,	—	·5	—	—
Eregli—						
Niebuhr	1766	8,	—	—	—	—
Wronchensko	1834	3,	—	·2	—	—
Hamilton	'37	5,	—	·2	—	—
Ainsworth	'39	4,	—	·2	—	—
Adana—						
Niebuhr	1766	45,	·1 ?	1,	—	—
Wronchensko	1835	12,	—	—	—	1, Christians
Ainsworth	'39	50, ?	—	—	—	10, „ ?
Amassia—						
Sestini	1782	15,	—	—	—	—
Dupré	1808	20,	—	6,	—	—
Kinneir	'10	35,	—	—	—	—
Rottiers	'18	20,	—	4,	—	—
Fontanier	'27	50, ?	·5	5,	—	—
Smith	'30	25,	·6	3,	—	—
Wronchensko	'34	22,	—	2,	—	—
Hamilton	'36	25,	·7	4,	—	—
Suter	'38	20,	·6	2,	—	—
Ainsworth	'39	18,	—	5,	—	—
Geurun—						
Injijian	1800	2,	—	2,	—	—
Brant	'35	9,	—	5,	—	—
Ainsworth	'38	4,	—	2,	—	—

TABLE IV.—*Comparative Population—Contd.*

Place and Authority.	Year.	Population in *Thousands.*				
		Total.	Whereof were			Other Races.
			Greeks.	Armenians.	Jews.	
Tokat—						
Sestini	1782	20,	1,	10,	—	—
Injijian	1800	80, ?	1,	12,	—	—
Gardanne	'07	18,	·1	1,	—	—
Rottiers	'18	40,	·2	1,	—	—
Smith	'30	32,	3,	6,	·3	—
Wronchensko	'34	45,	1,	10,	·2	—
Hamilton	'36	20,	—	10,	—	—
Boré	'38	40,	—	12,	—	—
Badger	'42	—	1,	10,	—	—
Sivas—						
Sestini	1782	15,	—	—	—	—
Injijian	1800	50, ?	—	10,	—	—
Dupré	'07	16,	—	4,	—	—
Fontanier	'27	40,	—	3,	—	—
Brant	'35	35,	—	6,	—	—
Suter	'38	32,	—	5,	—	—
Boré	'38	40,	—	10,	—	—
Kiresseun—						
Injijian	1800	5,	—	·1	—	—
Fallmerayer	'40	4,	·7	·2	—	—
Tripoli—						
Injijian	1800	4,	—	·2	—	—
Fallmerayer	'40	2,	·5	—	—	—
Trebisond—						
Injijian	1800	40,	7,	2,	—	—
Fontanier	'27	60,	3,	1,	—	—
Smith	'31	15,	4,	2,	—	—
Brant	'35	30,	4,	2,	—	—
Fallmerayer	'40	33,	2,	2,	—	—
Koch	'43	30,	1,	2,	—	—
Aumush Khaneh—						
Injijian	1800	9,	5,	·2	—	—
Kinneir	'14	7,	1,	·7	—	—
Smith	'30	5,	1,	·5	—	—
Kiepert	'42	10,	2,	·4	—	—
Shab Khaneh Kara Hissar—						
Injijian	1800	—	—	2,	—	—
Gardanne	'07	11,	—	—	—	—
Ker Porter	'19	2, ?	—	·2 ?	—	—
Fontanier	'27	15,	—	—	—	—
Smith	'30	9,	·1	3,	—	—
Brant / Suter	'35 / '38	13,	·2	2,	—	—

TABLE IV.—*Comparative Population—Contd.*

Place and Authority.	Year.	Population in *Thousands.*				
		Total.	Whereof were			Other Races.
			Greeks.	Armenians.	Jews.	
Erzeroom—						
Tournefort	1701	25,	·4	6,	—	—
Injijian	1800	120,	—	13,	—	—
Kinneir	'14	100,	2,	20,	—	—
Ker Porter	'19	50,	1,	5,	—	—
Ushskow	'28	150, ?	—	30, ?	—	—
After the Russian War—						
Aucher	1834	30,	—	—	—	—
Brant	'35	15,	—	—	—	—
Southgate	'37	35,	—	—	—	—
Plandin	'40	50,	—	—	—	—
Koch	'43	40,	—	—	—	—
Ardwin—						
Injijian	1800	10,	—	2,	—	—
Köhler	'42	7,	—	3,	—	—
Koch	'43	7,	—	2,	—	—
Guarracino	'44	5,	—	2,	—	—
Toprakkaleh—						
Injijian	1800	7, ?	—	some	—	—
Brant	'35	1,	—	·5	—	—
Koch	'43	1,	—	·5	—	—
Bayezid—						
Injijian	1800	25, ?	—	3,	—	—
Gardanne	'07	15,	—	—	—	—
Ushskow	'28	12,	—	2,	—	—
Smith	'30	3,	—	·9	—	—
Plandin	'40	2,	—	—	—	—
Mossool—						
Sestini	1782	50,	—	—	—	—
Gardanne	1808	120, ?	—	—	—	4, Syrians, &c.
Dupré	'08	50,	—	—	·7	10, ,,
Aucher	'35	30,	—	—	—	15, ,,
Ainsworth	'40	19,	—	—	—	5, ,,
Badger	'49	18,	—	—	1,	5, ,,
Mardin—						
Niebuhr	1766	15,	—	—	—	5, Syrians, &c.
Gardanne	1808	12,	—	—	—	5, ,,
Kinneir	'10	11,	—	1,	·2	—
Buckingham	'16	20,	—	—	2,	6, Syrians, &c.
Southgate	'37	15,	—	2,	—	4, ,,
Badger	'42	15,	—	2,	—	4, ,,
Diarbekir—						
Ives	1758	100,	—	—	—	6, Christians
Niebuhr	'66	90,	—	—	—	25, ,,

TABLE IV.—*Comparative Population—Contd.*

Place and Authority.	Year.	Population in *Thousands.*				
		Total.	Whereof were			Other Races.
			Greeks.	Armenians.	Jews.	
Diarbekir—Contd.						
Sestini	1782	50,	—	—	—	—
Injijian	1800	—	·2	—	·3	—
Dupré	'08	75,	—	—	—	26, Christians
Buckingham	'15	50,	·2	7,	—	2, Syrians, &c.
Brant	'35	45,	·3	7,	·2	—
Southgate	'37	—	—	—	·3	7, Christians
Badger	'42	—	—	8,	—	·6 Syrians
Seuwerek—						
Niebuhr	1766	10,	—	·7	—	—
Badger	1844	3,	—	·6	·02	—
Oorfah—						
Injijian	1800	60,	—	2,	—	—
Buckingham	'16	50,	—	1,	·5	1, Syrians
Aucher	'35	25,	—	1,	·5	1, „
Aoujoulat	'37	15,	—	1,	—	·5 „
Pletcher	'44	40,	—	1,	—	1, „

TABLE V.—*Population of Ottoman Empire; Proportions of Various Religions.* (*Calculated by Mr. F. Hendriks, from approximate data given by the undermentioned Statisticians.*)

Religion.	1 Turkey in Europe. Ubicini, 1850.	2 Turkey in Europe (including Islands). Ahmed Vefik, 1850.	3 Constantinople. (Official Annual), 1850-64.	4 156 Towns in Asia Minor. Hyde Clarke, 1864.	5 Turkey in Asia. Ubicini, 1850.	6 Ottoman Empire (excluding Egypt.) Ubicini, 1850.	7 Ottoman Empire (including Egypt). Ubicini, 1850.
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
Musulmans	30·	36·	55·	76·	79·	55·	60·
Greeks and Armenians	65·	59·	39·	23·	19·	41·	36·
Catholics	4·	4·	2·	—	1½	3·	3·
Jews	1·	·½	4·	1·	·½	·⅓	·⅓
Gipsies, Fire Worshippers, &c.	—	·½	—	—	—	·⅔	·⅔
	100·	100·	100·	100·	100·	100·	100·

On the Variation *of* Prices *and the* Value *of the* Currency *since* 1782. *By* W. Stanley Jevons, M.A., *Professor of Political Economy in Queen's College, Liverpool.*

[Read before the Statistical Society, May, 1865.]

The results which I wish to state in this paper were obtained by applying more extensively the method of investigation employed in a pamphlet on the "Value of Gold," published by me about two years ago.

Although my purpose then was only to ascertain the much questioned effect of the gold discoveries, a review of the prices of a period of twenty years seemed hardly sufficient even for that object. We cannot safely assert a given change of prices to be occasioned by an alteration in the supply of gold, unless we observe the general course of prices for a considerable period, and show that there was an *unusual change* in the course of prices subsequent to an *unusual change* in the supply of gold.

Nor do I think it useless when assisted by a distinct method of inquiry to go still further back, and bring into question the course of prices at the beginning of this century. No one, indeed, who knows the division of opinion which existed on this subject, the hundreds of publications it called forth, and the incessant discussions it created, would wish uselessly to raise the subject into debate again. But I think that a true understanding of the course of prices can alone explain many facts in the statistical and commercial history of the country.

It is true that we have Mr. Tooke's "History of Prices," a unique work, of which we can hardly over-estimate the value. But it has struck me that Mr. Tooke, and other writers on the subject of prices, were in want of some method of reducing their tables of prices, and eliciting the general facts contained in them. Large tables of figures are but a mass of confused information for those casually looking into them. They will probably be the source of error to those who pick out a few figures only; a systematic but probably tedious course of calculation and reduction is necessary to their safe and complete use.

My inquiry has accordingly consisted in applying such a method of reduction to the tables of prices contained in the "History of Prices" by Tooke and Newmarch, extending, with little interruption, from 1782 to recent years, the purpose being to ascertain

the course of prices of commodities generally, or of any distinct class of commodities separately.

The method of reduction used, consists in calculating the ratios of change of prices year after year, and then taking, by the aid of logarithms, the *geometric mean ratio of change of prices for each year*. The reasons for adopting the geometric mean were explained in my pamphlet,* and I still think those reasons sufficient. I must mention, however, that the method has been called in question by Dr. E. Laspeyres, Professor in the University of Basle, who has published† a complete and very valuable investigation concerning prices in Hamburg, including a review of some English writings, and of the previous labours of Sœtbeer in the same subject. Dr. Laspeyres urges, if I read him aright, that as the value of gold means its *purchasing power*, we ought to take the simple arithmetic average of the quantities of gold necessary for purchasing uniform quantities of given commodities. There is certainly some ground for the argument. But it may equally be urged that we should suppose a certain uniform quantity of gold to be expended in equal portions in the purchase of certain commodities, and that we ought to take the average quantity purchased each year. This

* The following is the passage referred to :—

"There is no such thing as an average of prices at any one time. If a ton of bar-iron costs 6*l.*, and a quarter of corn 3*l.*, there is no such relation or similarity between a ton of iron and a quarter of corn as can warrant us in drawing an average between 6*l.* and 3*l.*; and so of other articles. If at a subsequent time a ton of iron costs 9*l.*, and a quarter of corn 3*l.* 12*s.*, there is again no average between these qualities. We may, however, say that iron has risen 50 per cent., or by one half; what was 100 has become 150; corn has risen 20 per cent, or by one-fifth; what was 100 has become 120. Now the ratio 100 : 150 and 100 : 120, are things of the same kind, but of different amount, between which we can take an average.

This average percentage or ratio must be not the arithmetic but the geometric average * * * * * * * * * *
In common business matters it would be sufficient to take the simpler arithmetic mean in place of the other, and neglect the errors. But that cannot be done in the present inquiry, where our alterations of prices have a large range from more than 50 per cent. decrease to more than 100 per cent. increase. Thus the price of cocoa has nearly doubled since 1845-50. It has increased by 100 per cent., so that it is now nearly 200. Cloves, on the contrary, have fallen 50 per cent., and are now at 50. The arithmetic mean of these would be $\frac{200+50}{2}$ or 125. The average rise of cocoa and cloves would then appear to be 25 per cent. But this is totally erroneous. The geometric mean of the ratio 200 and 50, or which is the same of 2 and $\frac{1}{2}$, is 100 or 1. On an average of cocoa and cloves there has been no alteration of price whatever. * * * * A corresponding error of less amount would be committed in every case, did we take the simple arithmetic mean of percentages. The general result would be greatly to exaggerate the prices which have risen at the expense of those which have fallen."

"Serious fall in the value of gold, &c." pp. 6, 7.

† Hildebrand's "Jahrbuch von Nationaloekonomie," Bd. iii, s. 81, &c.

might be ascertained by taking the *harmonic mean.* Thus there are no less than three different averages which might be drawn.

Suppose, for example, that the price a of one commodity change to b, and the price p of another commodity change to q, then the arithmetic mean ratio of change which Dr. Laspeyres would adopt is

$$\frac{\frac{b}{a}+\frac{q}{p}}{2}, \text{ or } \frac{bp+aq}{2ap}.$$

The geometric mean is $\sqrt{\frac{b}{a}\times\frac{q}{p}}$.

The harmonic mean would be $\frac{1}{\frac{\frac{a}{b}+\frac{p}{q}}{2}}$ or $\frac{2bq}{aq+bp}$.

Suppose one commodity to remain unchanged in price ($a=1$, $b=1$), the other to be doubled ($p=1$, $q=2$), the mean rise of price might thus be variously stated:—

	Per Cent.
Arithmetic mean	50
Geometric ,, ...	41
Harmonic ,, ...	33

It is probable that each of these is right for its own purposes when these are more clearly understood in theory. But for the present approximate results I adopt the geometric mean, because (1) it lies between the other two; (2) it presents facilities for the calculation and correction of results by the continual use of logarithms, without which the inquiry could hardly be undertaken; (3) it seems likely to give in the most accurate manner such general change in prices as is due to a change on the part of gold. For any change in gold will affect all prices in an equal ratio; and if other disturbing causes may be considered proportional to the ratio of change of price they produce in one or more commodities, then all the individual variations of prices will be correctly balanced off against each other in the geometric mean, and the true variation of the value of gold will be detected.

In any case my tables will present a sufficient first approximation, and the striking phenomena detected will be under estimated rather than over estimated by my calculations. Thus the general rise of prices between 1845-50 and 1860-62, which I had estimated at 10·25 per cent.,* would have been, according to Dr. Laspeyres, 13·1 per cent., calculated on the arithmetic mean.†

* "A Serious Fall," &c., p. 29.

† "Hamburger Waarenpreise," &c. Hildebrand's "Jahrbuch," &c., Bd. iii, s. 97.

Calculations of this kind are far from being advocated now for the first time. Not to speak of Sir George Shuckburgh Evelyn's well known paper in the "Philosophical Transactions" for 1798 (part i, p. 176), it was proposed, more than thirty years ago, "to "correct the legal standard of value (or at least, to afford to indi- "viduals the means of ascertaining its errors), by the periodical "publication of an authentic price current, containing a list of a "large number of articles in general use, arranged in quantities "corresponding to their relative consumption, so as to give the rise "or fall, from time to time, of the mean of prices; which will "indicate, with all the exactness desirable for commercial purposes, "the variations in the value of money; and enable individuals, if "they shall think fit, to regulate their pecuniary engagements by "reference to this *tabular standard*."*

Such a proposal, though scarcely practicable, is interesting, and perhaps sound in a theoretical point of view.

I may add, that I had almost completed my calculations before I found that no less an authority than Mr. G. R. Porter had distinctly advocated and adopted a similar method. In the first edition of his "Progress of the Nation,"† he proposes the formation of extensive tables of prices, but adds:—"It is not meant by this to recommend "a mere record of the prices of goods, such as would be afforded by "a collection of prices current, but a calculation conducted upon "the plan already described, or some other that should be equivalent "to it, and which would afford, on inspection, a correct comparative "view of the average fluctuations that should occur." Mr. Porter actually publishes‡ such a table, giving for each month, 1833-37, the average ratio of variation (probably the arithmetic average) of the prices of fifty commodities. The tables greatly exaggerate the fluctuations compared with my tables, as may be seen in the following:—

Comparative Prices in the Month of March.

Year.	Porter. Fifty Articles.	Jevons. Forty Articles.
1833	100	100
'34	110	103
'35	117	104
'36	128	114
'37	125	111

* "Principles of Political Economy," by G. Poulett Scrope, M.P., London, 1833, p. 406.

† Vol. ii, p. 235.

‡ Ibid., vol. ii, pp. 236, 237.

This subject of mean prices was again considered in a most curious mathematical pamphlet "On Currency," anonymously published in the year 1840.* Several able articles, too, by M. Levasseur in the "Journal des Économistes," bear upon the subject.

I come now to the actual construction of my tables. I selected from Mr. Tooke's tables about forty of the chief commodities, including the official prices of corn, and the prices of butchers' meat and fodder. The particulars are stated in the appendix. A single quotation having been obtained for each year, in the case of some commodities, a yearly average, but in general the medium of the highest and lowest prices in the March quotations of Mr. Tooke's tables, the ratio of each yearly price to that of the preceding year was calculated in logarithms, as in the following example:—

Price of Wheat.

Year.	Yearly Price.	Logarithm of Number of Pence.	Difference.
	£ *s.* *d.*		
1782.....	2 9 3	0·772	—
'83.....	2 14 3	0·814	0·042
'84.....	2 10 4	0·781	$\bar{1}$·967
'85.....	2 3 1	0·714	$\bar{1}$·933
'86.....	2 — —	0·681	$\bar{1}$·967
'87.....	2 2 5	0·707	0·026

The logarithm in the third column is obtained by subtracting each logarithm in the second column from the logarithm of the succeeding year. In practice it was more convenient to subtract each logarithm from the preceding one, the reciprocals of the ratios being used all through the calculations until the averages were completed, when they were easily turned back.

Tables of the above form having been made nearly complete for the period of years 1782-1864, for about forty kinds of commodity, the logarithmic ratios for each year were copied out in perpendicular columns, and in an order previously carefully determined on. The several proximate groups were then added up and averaged. By adding together the sums of the first groups, larger groups can readily be formed, and the addition of these gives the final sum of the ratios of the whole forty commodities. The following is an example of the second series of tables:—

* Knight, London, p. 36.

Prices of Agricultural Produce.

Line.	Commodities.	Logarithmic Ratios of Prices.	
		1832 to 1831.	1833 to 1832.
1	Wheat	·014	$\bar{1}$·947
2	Barley	·067	$\bar{1}$·940
3	Oats	·016	$\bar{1}$·906
4	Rye	·047	$\bar{1}$·937
5	Beans	·042	$\bar{1}$·948
6	Peas	·030	$\bar{1}$·945
7	Hay	$\bar{1}$·945	·033
8	Clover	·020	·038
9	Straw	$\bar{1}$·903	·000
10	Sum of corn (1—6)	·216	$\bar{1}$·623
11	Average of corn	·036	$\bar{1}$·937
12	Sum of fodder (7—9)	$\bar{1}$·868	·071
13	Average of fodder	$\bar{1}$·956	·024
14	Sum of corn and fodder (10, 12)	·084	$\bar{1}$·694

The averages thus determined, however, only give the ratio of prices each year to those of the preceding year. To get the complete and continuous course of prices of any set of commodities, we must join on the separate yearly ratios to each other year after year, by the simple addition of the logarithms, as in the following example:—

Prices of Metals, Copper, Lead, Tin Iron.

Year.	Ratio of Prices each Year to those of the Preceding Year.	Ratio of Prices each Year to Prices of 1782.	
	Logarithm.	Logarithm.	Common Number.
1782	0·000	0·000	100
'83	$\bar{1}$·999	$\bar{1}$·999	100
'84	$\bar{1}$·957	$\bar{1}$·956	90
'85	$\bar{1}$·995	$\bar{1}$·951	89
'86	0·026	$\bar{1}$·977	95
'87	$\bar{1}$·992	$\bar{1}$·969	93
'88	0·011	$\bar{1}$·980	96

In the third column each number is found by adding the preceding number to the number of the succeeding year in the second column, as for instance:—

$$\bar{1}\cdot977 = \bar{1}\cdot951 + \cdot026.$$

A difficulty arises concerning the classification of commodities, that there is no single system of groups into which they naturally fall. It may always be objected that any one arrangement is arbitrary. The fact is, that a mass of forty commodities may be classified in a great number of ways. The principle I adopted, therefore, was to try all systems of classification which seemed to be founded on any material distinctions; in short, to try as many different systems as I could, and then to adopt any which seemed to elicit important information.

The first proximate grouping was nearly that adopted in my gold pamphlet, and in most other arrangements it was sufficient to join these groups together.

A complete classification according to *locality of production*, was rendered impossible, because most commodities are produced in several different parts of the world. The natural and impassable division of tropical and temperate regions, however, enables us to separate their respective products, and it will appear that important results may be obtained by considering the products of eastern countries apart from other commodities.

For the period of years, 1800 to 1820, a correction is obviously necessary to reduce prices and their variations to a gold standard. A table is to be found in most works on the currency, giving the depreciation of the Bank of England paper during each of those years, and the authorities for some of these numbers are given in a pamphlet by the Earl of Lauderdale.* These numbers, indeed, bear some internal signs of want of accuracy and reliability, arising, no doubt, from the fact that the depreciation of the currency was not recognised by the law. The prices of silver probably furnish a better criterion of the value of the paper currency, and their variation is shown in Table I (Appendix), calculated from the average variations of the price of standard silver and Spanish dollars, as given in "Tooke's History" (vol. ii, p. 384), and the "Report of "the Bullion Committee, 1810," p. [22]. There is, however, a general accordance between the variation of price of silver and gold, and as it is convenient to keep to a single standard, I have reduced all the tables to the gold standard by the subtraction of the logarithms in column (3) of Table I from the logarithmic ratios of prices in the corresponding years to prices in 1782.

* "Depreciation of the Paper Currency of Great Britain proved," London, 1812.

A further step seemed necessary to present the information contained in these tables in the simplest form. The price of each commodity and group of commodities, varies both from causes peculiar to each commodity, and from causes affecting gold, the measure of value. The latter are common to all, and their effects are more or less truly shown in the general variation of price of all commodities. If then we divide the ratios of variations of individual commodities and partial groups by the ratios of all commodities, which is done by the simple subtraction of the corresponding logarithms, we get the variations peculiar to each commodity or partial group (See Appendix, Table VIII, comparative variations).

The logarithmic ratios thus prepared may be turned back into natural numbers, giving the ratios of prices each year to prices in 1782. But, for most purposes, I should prefer to retain the ratios in their logarithmic form, and represent them to the eye upon a diagram. The diagrams* appended to this paper are thus drawn, and have several advantages over those drawn on the scale of common numbers. Equal perpendicular distances represent equal ratios of change, and straight lines represent numbers in geometric, not in arithmetic, progression. A tendency may be observed in most statistical curves to become divergent, or to run up into excessive elevations. This is easily understood, when we consider that in almost every branch of statistics numbers should be considered relatively to each other, which may most easily be done by representing them on a logarithmic scale.

The datum point to which the numbers in the tables and curves are referred, is given by the prices of the year 1782, the first year of Mr. Tooke's tables. This is a purely arbitrary commencement, and it might seem desirable to substitute for it some carefully selected average of a period of years. But I conceive that when we have the variations of a long series of years presented in a curve, no such datum line is necessary, as the eye easily compares any year or period with any other year or period.

It is impossible here to notice more than a very small part of the information contained in the tables. We notice the tendency of animal and mineral substances to rise in price, and of vegetable substances, at least in this country, to decline.

The curve of the general variation of prices is perhaps the most interesting. In this we detect a series of smaller undulations, riding, as it were, on one very great one. We see elevations of prices probably due to speculation, and reaching their highest points in the years 1796, 1801, 1809, 1814, 1818, 1825, 1836,

* These diagrams represent the variations of prices in currency, not corrected during the period 1800-1820 for depreciation of the paper currency. In the tables the correction has been made.

1839, 1847 and 1857. The speculation of 1793 is hardly perceptible, and the extraordinary rise of prices in 1825 is chiefly marked by a pause in the very rapid downward course of prices about that time. From 1833 to 1843, there is an elevation of prices of a more extensive character than can well be assigned to speculation alone. Since 1852, lastly, prices have risen in a permanent manner, which points to some effect of the Californian and Australian discoveries.

It is, however, the general form of the undulation of prices which is most remarkable. After the year 1790 an enormous and long-continued elevation presents itself. And when prices had reached their highest, about the year 1809, a still more surprising fall of prices commences, reaching its lowest point in 1849. Between 1809 and 1849, prices fell in the ratio of 100 to 41.

My purpose is to ascertain and measure these great changes with some approach to certainty and accuracy, and to establish them as facts of observation. To explain or account for them is a matter which I do not undertake. I cannot help noticing, however, the insufficiency of all explanations yet given of the state of prices in the early part of the century. Fiercely though the subject was debated, it was impossible at the time, perhaps, to form any adequate notions of the great movement of prices. Some writers laboured to prove that prices were unchanged, and those who were less wrong about the fact were hardly less wrong in attributing that fact to the deranged state of currency and banking at the time. Subsequently Mr. Tooke's "History of Prices" came to be regarded as the authority on the subject. Mr. Tooke's main purpose was to disprove all these notions about the extraordinary influence of currency. He allowed, of course, that the note currency was depreciated in the small degree marked by the increased price of gold bullion. But, beyond this, he would not allow any influence to the derangement of currencies, and what elevation of prices he supposed to exist, was attributed by him to the frequency of bad harvests at the time, or to the derangement by war of the ordinary relations of supply and demand. In these opinions I conceive that Mr. Tooke was partially, and only partially, right. On the one hand, I cannot too fully concur in Mr. Tooke's protest against attributing every evil to the currency, which is a very passive thing, and does not deserve to be made the scape goat it long has been. But, on the other hand, it cannot be denied that the extraordinary issue of Bank of England and private bank notes in England during the suspension of specie payments, drove out a large mass of metallic currency. Other amounts were similarly displaced by the paper currencies of France, Austria, Russia and some other countries. In the aggregate a considerable mass of precious metals must have been thrown on European markets, and to this cause we must assign some

part of the elevation of prices. Mr. Jacob,* indeed, argues that this effect of the paper currencies would be inconsiderable, and without attempting to discuss the subject further here, I am quite ready to allow it would only produce a small part of the elevation of prices.

But then I think the cause assigned by Mr. Tooke was equally insufficient, namely, the unusual frequency of bad seasons. I cannot think that Mr. Tooke, when assigning such a cause, was fully aware how great and general was the rise of prices. Bad seasons might well raise the prices of all kinds of corn, fodder, meat and agricultural produce, but could not have any permanent effect upon the prices of other articles. Now, though corn did rise extravagantly in price on several occasions during the period under review, on the whole it did not rise so much as metals, fibres, oils and some other articles. At the most, I think the unusual frequency of bad harvests could only be a partial contributing cause to the general rise.

The elevation of prices in the early part of the century is still more striking when contrasted with the subsequent great fall, proceeding from 1818 to 1830, and reaching its lowest point as yet in 1849. This fall is less difficult to understand. The production of almost all articles has been improved, extended, and cheapened during this period, and all imported articles must, too, have been affected by improvements in navigation, while there was no corresponding improvement in the production of the precious metals, from the derangement of the American mines in 1810 to the Californian discoveries in 1849.

But this argument tells two ways, for manufactories and modes of production were undergoing improvement in the earlier period, while prices were rising, as well as in the latter period, while they were falling. Even our foreign trade suffered no great check during the wars, and the very foundations of our home industries were being energetically laid throughout the period from 1782 to 1815, when prices were high or rising. The progress of our industry, in short, has been continuous, and its only change that of acceleration in recent years. There is nothing in such constant progress that can account for a great rise of price followed by a great fall.

If the progress of invention causes a fall of price, then we need even more potent causes to raise prices in opposition to it in the early part of this century, when invention was most active.

The production of gold, on the other hand, has† been far from uniformly progressive. It progressed up to the beginning of the century, but suffered a serious relapse in 1810, when the American

* "Historical Inquiry into the Production and Consumption of the Precious "Metals," vol. ii, pp. 366—371. Mr. Jacob's opinion is disputed in the "Quarterly Review, No. 94."

† See the diagram prefixed to Stirling's "Gold Discoveries," Edinburgh, 1853.

mines were deranged by the Spanish War of Independence. Mr. Jacob estimates the average produce, from 1810 to 1830, at one-half the previous amount, and this failure must be regarded as one of the contributing causes to the fall of prices.

Further light may, however, be thrown upon the question, whether gold could be said to be depreciated in the early part of this century, by considering the relative prices of the products of different countries and the state of the exchanges. Professor Cairnes has most clearly pointed out the effects of a flood of gold in successively raising prices in the countries into which it flows.* He established theoretically that while the precious metals are copiously flowing, for instance, from this country to India, prices here must be higher than in India; hence all articles will be dear in price here, except those tropical products which we buy from India.

It was, if I recollect aright, noticed by Mr. Newmarch, in the sixth volume of "Tooke's History," that the prices of tropical and some colonial produce had scarcely risen of late years. I encountered the same fact which I stated, being then quite unacquainted with Professor Cairnes' writings on the subject, in the following words:—"All the groups which have fallen in price, are of vegetable origin, "and chiefly of foreign growth,"—and I gave what I thought an obvious, though perhaps mistaken, explanation of "the marked "distinction between the classes of materials which have risen in "price and those of foreign articles of food which have fallen."†

Now when Professor Cairnes read my pamphlet he detected, in this comparative fall of the price of oriental produce, a confirmation of his own theoretical views of the effects of an excess of gold in one country and its motion towards another country. These three facts, (1) a distinct, though moderate general rise of prices here; (2) a drain of bullion to the east; (3) a comparative fall in the price of oriental produce formed, in his opinion, when taken in union, a complete demonstration of some depreciation of gold since the Australian discoveries.

When I had nearly completed the reduction of Mr. Tooke's tables, I could not help being struck by the fact that when prices were highest here, between 1800 and 1815, the prices of eastern produce were not higher than they had been, and consequently in comparison with the prices of other articles had fallen. This fact, according to Professor Cairnes' views, would inevitably point to a comparative redundancy of gold in Europe. I was therefore lead to inquire into the past fluctuations of the current of specie towards the east.

* "Report of the British Association," 1858; "Dublin Statistical Journal," January, 1859; "Frazer's Magazine," September, 1859, and January, 1860; "Economist," 30th May, 1863.

† "A Serious Fall," &c., p. 31.

It does not seem possible to form any one complete series of accounts of the export of bullion, extending over the whole period of our inquiry, but we may perhaps pretty safely infer the character of the fluctations from tables given in the Appendix.

The current of gold having been very steady during the earlier half of last century, fluctuated a good deal during the second half of the century. It was considerable in the period 1785 to 1791 or 1792; then it fell off very much, and only began to rise again into importance in 1797. In the years 1798, 1799, 1802, 1803, 1804, and 1805, the exports both of the East India Company and of private persons were very great, the exports of the Company at least reaching greater amounts than had ever been known before.

Independent evidence of the increased current of precious metals setting towards the east in the early years of this century, is seen in the table of imports into Bengal, given in Milburn's "Oriental "Commerce." And the later course of the trade is given in the half official tables of Martin's "British Colonies," p. 360, B, &c.*

The current greatly fell off in the period 1806-13, but stood at a very high amount in the years 1814-19. After 1820 the drain decreased very rapidly, and the exports of other merchandise increased, so that about the year 1832 the current of treasure actually turned in the opposite direction for a year or two. With slight exceptions there was then no considerable movement until the Californian and Australian discoveries of gold, which were followed almost immediately by the great drain, unremitted to the present time.

Viewed by itself, the current of specie would not afford any safe criterion of variations in value of gold here. It might easily be asserted that the growth of our trade about the beginning of the century required increased remittances, especially after the opening of the trade to India in 1814; that afterwards the increased export of cotton and other manufactures took the place of treasure. Under this view, however, the recent drain of bullion stands out as unaccountable.

Then again it will probably be said that the great wars were sufficient to account for great remittances of treasure and for interruptions of trade. I am quite willing to allow to such causes all that can be fairly attributed to them, but I cannot regard occasional and temporary events as the causes of long-continued changes of trade.

When we compare the large average exportation of treasure during the period 1798-1820, with the high range of general prices at the time, and the comparatively low price of oriental produce,

* See also Tooke on "High and Low Prices," p. 211.

when we remember that the increased abundance of gold in late years has been accompanied by somewhat increased prices, by an enormous drain of bullion to the east, and again by a low price of oriental produce; and when we observe especially that between these two periods, when prices in general were very rapidly falling, or were low, and oriental produce comparatively high, the drain of bullion was either small or actually reversed, we can hardly help connecting these events as causes and effects.

I am far from asserting, indeed, that there is any exact coincidence between the state of prices and the drain of bullion in the period 1798-1820, that would put the question beyond doubt. The drain for instance was greatest after 1814, when general prices here had already fallen, and the prices of oriental produce had risen. But this discordance is of a kind which might be accounted for by the opening of markets, and by political events. Such events may dislocate and reverse a trade for a few years, but on an average of a long period trade will assert its own character, and deeper causes will produce their effects.

I do not attempt to account for the comparative redundancy and depreciation of gold, which I believe to have existed in Europe in the early part of this century. No single cause that I know of can be sufficient to account for so singular an event. The discovery of the Russian mines, and the increased yield of the Spanish American mines, would contribute something to the observed effects, but would be totally inadequate to their complete explanation. It seems impossible to tell the net effect of the long-continued wars. The displacement of metallic by paper currency, and the diminished sphere for its use by the restriction of trade, would tend to throw quantities of metal on the market. But, on the other hand, the hoarding or sluggish use of currency occasioned by war, and the demand and dispersion of metallic money by armies in the field, would tend to absorb those supplies. It seems impossible to say what the balance would be. I assert, the redundancy of gold in the early part of the century, then, a simple *fact of observation*.

These views of the relation of the eastern drain of treasure to the state of prices here, if accepted, throw considerable light upon the course of prices since the gold discoveries. Those who predicted a revolution in monetary affairs from the great flood of gold, have been thoroughly disappointed. Fifteen years have elapsed, and the diggings have perhaps passed the meridian point of their prosperity without any appearance of a commercial revolution. But those, I conceive, are also wrong who proved there was and could be no depreciation of gold; who even went so far as to assert that gold naturally opens a way for its own employment.

European markets, where expedients for economising currency

are in common and growing use, could not possibly absorb the continuous supplies from the diggings without a complete revolution in prices. But no sooner had a certain moderate rise occurred, than the surplus of the precious metals flowed off to the east, where an immense metallic currency, an absence of any modes of economising it, and a general taste for the luxurious use of the precious metals, opens a great sphere for their absorption and consumption. That this current was occasioned by the redundancy of gold, is proved, as Professor Cairnes anticipated, by a low price of oriental produce.* Had it been occasioned by an immense demand here for oriental produce, and a consequent balance of trade outwards, oriental produce would have been comparatively high, not low in price.

Asia, then, is the great reservoir and sink of the precious metals. It has saved us from a commercial revolution, and taken off our hands many millions of bullion which would be worse than useless here. And from the earliest historical ages it has stood in a similar relation to Europe. In the middle ages it relieved Europe of the excess of Spanish American treasure, just as it now relieves us of the excess of Australian treasure. "The Indian trade," says Macpherson,† "arose to considerable magnitude, at the same time that "the American mines began to pour their treasures into Europe, "which happily has been preserved by the exportation of silver to "India, from being overwhelmed by the inundation of the precious "metals, as it must have been had no such exportation taken place." And "Raynal affirms that the Spaniards must have abandoned their "most productive mines of silver in America, as they had already "abandoned many of the less productive ones, if the progress of the "depreciation of silver had not been somewhat retarded by the "exportation of it to India."‡

If the state of prices here, then, depends upon prices in India, we should be backward in making predictions of their future course. But we may perhaps speak with the more confidence of the accomplished results of the gold discoveries. Prices had been falling with little interruption from 1810 to 1849. The years 1836-39 form a temporary but remarkable exception. In 1849-52 prices were unprecedently low, and *cæteris paribus*, we might have expected that after another period of speculation and its corresponding relapse of

* I had also said ("Serious Fall," &c., p. 37), "having shown upon a wide basis "of facts that both gold and silver are depreciated here, I am much more inclined to "regard this depreciation as the cause of the eastern drain. The fall in the value "of silver, compared with most other goods, makes it more profitable to pay for "eastern produce with silver bullion than with our manufactures, silver being "always acceptable among Asiatic nations."

† "Commerce with India," p. 337.

‡ "Commerce with India," quoting "Histoire Phil. et Pol. des deux Indes," vol. iii, p. 169, edit. 1782.

trade, prices should descend still lower. But prices in 1858 were still 18 per cent. above those of 1852.

Since 1858 enormous fluctuations have taken place in the price of many commodities. The price of cotton has been quadrupled and again halved. Corn has fallen to what seems a natural minimum price, and meat and fodder have greatly advanced. There has been a great recent fall, too, in the price of many kinds of imported produce. Yet when the average of all kinds of commodity is struck, we find that prices, since 1858, have been uniform in an unprecedented manner. The average fall since last year has been trifling. If we compare prices now (March, 1865) with what they were at their lowest in 1849, we find there has been a rise of 21 per cent. If we take the average of 1845-50 as our standard of comparison, the rise is 11 per cent. The real permanent rise due to the gold discoveries is doubtless something between these, or probably nearer the higher limit, 21 per cent. The gold discoveries have caused this rise of price. They have also neutralized the fall of prices which might have been expected from the continuous progress of invention and production, but of which the amount is necessarily unknown. It may be confidently asserted, then, that the Californian and Australian discoveries have had a considerable effect in reversing the previous course of prices, but it is impossible to state the amount of that effect with any approach to certainty.

APPENDIX.

I.—*Table showing the Variation of the Prices of Gold and Silver Bullion during the Suspension of Specie Payments at the Bank of England.*

1	2	3	4	5	6
Year.	Price of Gold.	Ratio of Price of Gold to Standard Price.		Ratio of Price of Silver, to the Price of Silver in 1798.	
		Logarithm.	Number.	Number.	Logarithm.
	£ *s.* *d.*				
1798	3 17 10½	0·000	100	100	·000
'99	—	0·000	100	103	·014
1800	—	0·000	100	111	·047
'01	4 5 –	0·038	109	115	·060
'02	4 4 –	0·033	108	109	·037
'03	4 – –	0·012	103	108	·033
'04	—	0·012	103	105	·023
1805	—	0·012	103	109	·035
'06	—	0·012	103	108	·032
'07	—	0·012	103	106	·025
'08	—	0·012	103	105	·023
'09	—	0·012	103	106	·025
1810	4 10 –	0·063	116	111	·045
'11	4 4 6	0·036	109	118	·071
'12	4 15 6	0·089	123	122	·088
'13	5 1 –	0·113	130	133	·125
'14	5 4 –	0·126	134	123	·089
1815	4 13 6	0·080	120	105	·022
'16	4 13 6	0·080	120	94	$\bar{1}$·971
'17	4 – –	0·012	103	91	$\bar{1}$·960
'18	4 – –	0·012	103	97	$\bar{1}$·988
'19	4 1 6	0·020	105	99	$\bar{1}$·994
1820	3 19 11	0·011	103	93	$\bar{1}$·968
'21	3 17 10½	0·000	100	91	$\bar{1}$·957

Note.—Column 3 of the above table contains the logarithms by the subtraction of which prices are reduced to a gold standard.

TABLES SHOWING THE VARIATIONS IN THE MOVEMENT OF BULLION TO THE EAST.

II.—*Average Yearly Value of the Exports of Treasure by the East India Company.*

Decennial Period.	Value in Pounds Sterling.
1711–20	434,000
'21–30	532,000
'31–40	487,000
'41–50	631,000
'51–60	571,000
'61–70	152,000
'71–80	43,000
'81–90	393,000
'91–1800	352,000
1801–07	852,000

Note.—The yearly exports of treasure and merchandise, 1711-1807, are given at length in Milburn's "Oriental Commerce," p. 419.

III.—*Average Yearly Amount of Bullion by Weight, Exported by the East India Company and by Private Persons, chiefly Silver.* (See Table V.)

Period.	Ounces.
1791–1800	2,055,000
1801–08	3,781,000

IV.—*Average Yearly Value of Bullion absorbed by the Presidencies of India, being the excess of Imports over Exports.* (See Table VI.)

Period of Years.	Value in Pounds Sterling.
1802–10	1,998,000
'11–20	2,827,000
'21–30	1,333,000
'31–40	1,373,000
'41–50	2,308,000
'51–56	6,320,000

V. — *Table showing the Quantity of Gold and Silver in each Year, 1788-1808, Exported by the East India Company, to China and the East Indies, whether on account of the Company or of Private Persons.*

[0,000's omitted.]

Year.	Millions of Ounces.	Year.	Millions of Ounces.
1788	2,68	1798	3,57
'89	2,15	'99	7,29
		1800	1,38
1790	4,04	'01	2,26
'91	3,49	'02	2,48
'92	2,92	'03	7,98
'93	,32	'04	4,08
'94	,18		
		1805	8,74
1795	,15	'06	3,43
'96	,29	'07	,36
'97	,96	'08	,92

Note.—Calculated from Account No. IX in the Appendix to the "Report of "the Bullion Committee," 1810.

VI.—*Table showing the Value of the Treasure absorbed in each Year, 1802-1856, by the Three Presidencies of India, being the Excess of Imports from all parts over Exports.*

[0,000's omitted.]

Year.	Value in Millions of Pounds Sterling.	Year.	Value in Millions of Pounds Sterling.
1802–03	1,73	1830–31	,93
'03–04	1,58	'31–32	— ,41
'04–05	2,27	'32–33	— ,32
		'33–34	1,10
1805–06	2,21	'34–35	1,70
'06–07	2,65		
'07–08	2,01		
'08–09	1,01	1835–36	2,04
'09–10	2,37	'36–37	1,77
		'37–38	2,30
1810–11	2,15	'38–39	2,66
'11–12	1,07	'39–40	1,47
'12–13	,87		
'13–14	,62	1840–41	1,42
'14–15	1,21	'41–42	1,33
		'42–43	3,23
1815–16	2,10	'43–44	4,05
'16–17	4,01	'44–45	2,65
'17–18	4,30		
'18–19	6,77	1845–46	1,68
'19–20	4,25	'46–47	2,23
		'47–48	,55
1820–21	3,05	'48–49	1,66
'21–22	1,61	'49–50	2,43
'22–23	2,02		
'23–24	,39	1850–51	3,27
'24–25	,96	'51–52	4,13
		'52–53	5,78
1825–26	1,54	'53–54	3,39
'26–27	1,80	'54–55	,76
'27–28	1,89		
'28–29	1,20	1855–56	10,70
'29–30	,99	'56–57	13,16

Note. — The numbers 1802-33 are reduced from the table in Martin's "British Colonies," p. 360 B. The continuation of the account is from McCulloch's article "Precious Metals" in the "Encyclopœdia Britannica," 8th edit., p. 469.

During the years 1831-32 and 1832-33, there was an excess of exports over imports of 410,000*l.* and 320,000*l.* respectively.

About 1818 there was an unusually large Government remittance to India.

VII.—*List of Commodities treated in the Tables.*

From 1782 to 1844 the prices were mostly taken from Mr. Tooke's tables. After 1844 the average prices, as calculated from the price lists of the "Economist," and printed in my "Serious Fall," &c., p. 21, were mostly used, the commodities being nearly identical with those quoted in Mr. Tooke's tables, and subsequently in the valuable annual review of trade in the "Economist" newspaper. Concerning inconvenient, but unavoidable, changes of quotation, see Mr. Danson's note in Tooke's "History," vol. vi, p. 491. The following list notices the more important variations only.

The brackets indicate the groups of commodities, or else point out where several qualities of one commodity have been joined and averaged before being thrown as one unit into larger groups.

METALS

- Copper, tough cakes.
- Lead, British pigs.
- Tin, English bars.
- Iron
  - Pig, Tooke, 1782-94, 1816-39, 1801-32, Matthews's "Report of Commission on Manufactures."
  - Wrought, Russia, 1782-39; Swedish, 1839-56; Swedish steel, 1857-65.
  - Welsh bars, 1806-57, "Serious Fall," &c., p. 12.

OILS

- Gallipoli, in bond; linseed after 1844.
- Fish; palm after 1844.

Tallow, St. Petersburg.

Tar, Stockholm.

- Ashes, barilla; Carthagena in bond to 1836.
- „ pearl; Dantzic or Russia to 1839.
- „ Canadian pearl, first sort, 1840-45.

TIMBER

- Memel fir, in bond.
- Quebec yellow pine, 1784-1806, 1820-39, 1813-21, McCulloch's "Dictionary," Canadian yellow pine, 1856-65.

Hemp, St. Petersburg, clean.

FIBRES

- Cotton, upland, 1793 } after 1801, from table in "Exchange
- „ Pernam, 1788 } "Magazine," October, 1862, or *Journal*
- „ Surat, 1790 } *Statistical Society*, December, 1862.
- „ Surinam, 1782-44; Demerara after 1820.

- Wool, Southdown, average 1784-1845, McCulloch's "Dictionary."
- „ Spanish, South Australian lambs, 1861-65.

- Silk, China, raw.
- „ Reggio, raw, 1844; Italian raw, all descriptions.

- Flax, St. Petersburg.

DYE MATERIALS

- Logwood, Jamaica.
- Indigo, superior and inferior, East India.
- Cochineal, Spanish; Teneriffe after 1861.

VII.—*List of Commodities treated in the Tables—Contd.*

- Hides, B.A. and M.V. dry, after 1844.
- Leather, crop hides, after 1844.

Corn
- Wheat, "Gazette" average.
- Barley, ,,
- Oats, ,,
- Rye, ,,
- Beans, ,,
- Peas, ,, from 1792.

Fodder
- Hay, "Gentleman's Magazine," 1798.
- Clover, ,, 1803.
- Straw, ,, 1798.

Meat
- Mutton, St. Thomas's Hospital average.
- Beef, ,, ,,
- Irish mess beef, after 1848 American and Canadian.
- Pork after 1845.

Butter, Waterford, &c.

- Sugar, Muscovados, "Gazette" average after 1800.
- ,, Havannah for exportation, 1801-46.

- Tea, congou.
- ,, hyson.

- Coffee, superior British plantation.
- ,, inferior ,,
- ,, St. Domingo for exportation, after 1807.

Spirits, Jamaica rum.

Rice, Carolina, 1782-1839.
Pepper, East India black.
Cinnamon, first quality in bond.
Tobacco, Virginia, in bond.

The following groups are thus composed:—

Oriental Produce.	Tropical Food.
Indigo.	Sugar.
Pepper.	Tea.
Cinnamon.	Coffee.
Tea.	Spirits.
Sugar.	Pepper.
China silk.	Cinnamon.
Surat cotton.	Rice.
	Tobacco.

VIII.—*Proportional Variation of Prices from* 1782.

	General Variation of all the Forty Commodities.			Oriental Products.		Tropical Food.	
	Gold Standard.	Paper Standard.	Gold Standard. Logarithm.	Actual.	Comparative.	Actual.	Comparative.
1782.....	100		·000	100	100	100	100
'83.....	100		·001	101	101	87	87
'84.....	93		$\bar{1}$·966	94	102	82	89
'85.....	90		$\bar{1}$·956	93	103	70	77
1786.....	85	Uncorrected for depreciation (1801-20).	$\bar{1}$·927	82	97	64	76
'87.....	87		$\bar{1}$·941	91	105	70	79
'88	87		$\bar{1}$·941	91	105	74	84
'89.....	85		$\bar{1}$·930	85	100	70	82
'90.....	87		$\bar{1}$·937	80	92	69	80
1791.....	89		$\bar{1}$·947	89	101	72	81
'92.....	93		$\bar{1}$·969	107	115	81	87
'93.....	99		$\bar{1}$·994	96	97	79	80
'94.....	98		$\bar{1}$·989	84	86	72	74
'95.....	117		·067	96	82	93	80
1796.....	125		·097	105	84	102	82
'97.....	110		·043	85	77	87	79
'98.....	118		·070	107	91	98	83
'99.....	130		·113	100	77	86	66
1800.....	141		·148	80	57	84	60
1801.....	140	153	·147	80	57	73	52
'02.....	110	119	·042	74	67	68	62
'03.....	125	128	·096	74	60	67	54
'04.....	119	122	·074	71	60	64	54
'05.....	132	136	·120	79	60	75	57
1806.....	130	133	·113	79	61	70	54
'07.....	129	132	·110	73	57	63	49
'08.....	145	149	·160	84	58	71	49
'09.....	157	161	·195	86	55	82	52
'10.....	142	164	·152	83	59	75	53
1811.....	136	147	·132	74	55	60	44
'12.....	121	148	·081	66	55	58	48
'13.....	115	149	·060	68	59	67	59
'14.....	114	153	·058	90	78	84	73
'15.....	109	132	·039	82	75	77	71
1816	91	109	$\bar{1}$·959	68	75	63	69
'17.....	117	120	·067	81	69	77	66
'18.....	132	135	·119	90	69	92	70
'19.....	112	117	·048	74	66	73	65
'20.....	103	106	·013	65	63	67	65

VIII.—*Proportional Variation of Prices—Contd.*

	All Commodities.		Oriental Products.		Tropical Food.	
	Gold Standard.	Logarithm.	Actual.	Comparative.	Actual.	Comparative.
1821.....	94	$\bar{1}\cdot975$	68	72	63	66
'22.....	88	$\bar{1}\cdot946$	67	76	61	70
'23.....	89	$\bar{1}\cdot948$	65	73	62	70
'24.....	88	$\bar{1}\cdot946$	61	69	52	58
'25.....	103	$\cdot014$	80	78	65	63
1826.....	90	$\bar{1}\cdot953$	56	62	55	61
'27.....	90	$\bar{1}\cdot956$	58	64	54	60
'28.....	81	$\bar{1}\cdot909$	53	65	48	60
'29.....	79	$\bar{1}\cdot899$	51	64	49	62
'30.....	81	$\bar{1}\cdot906$	52	64	47	59
1831.....	82	$\bar{1}\cdot915$	49	59	48	58
'32.....	78	$\bar{1}\cdot893$	49	62	50	63
'33.....	75	$\bar{1}\cdot877$	50	67	49	65
'34.....	78	$\bar{1}\cdot891$	53	68	50	64
'35.....	80	$\bar{1}\cdot905$	58	72	51	64
1836.....	86	$\bar{1}\cdot935$	60	69	54	63
'37.....	84	$\bar{1}\cdot922$	50	60	48	63
'38.....	84	$\bar{1}\cdot924$	53	63	52	62
'39.....	92	$\bar{1}\cdot965$	56	61	61	66
'40.....	87	$\bar{1}\cdot940$	56	64	60	68
1841.....	85	$\bar{1}\cdot928$	51	60	53	63
'42.....	75	$\bar{1}\cdot875$	45	60	46	62
'43.....	71	$\bar{1}\cdot851$	45	64	44	62
'44.....	69	$\bar{1}\cdot840$	42	61	42	60
'45.....	74	$\bar{1}\cdot867$	38	51	40	54
1846.....	74	$\bar{1}\cdot871$	37	49	38	52
'47.....	78	$\bar{1}\cdot894$	36	46	40	51
'48.....	68	$\bar{1}\cdot831$	31	46	35	52
'49.....	64	$\bar{1}\cdot806$	33	52	36	56
'50.....	64	$\bar{1}\cdot808$	38	59	39	61
1851.....	66	$\bar{1}\cdot817$	36	56	41	62
'52.....	65	$\bar{1}\cdot810$	34	53	34	52
'53.....	74	$\bar{1}\cdot871$	36	49	38	52
'54.....	83	$\bar{1}\cdot919$	34	41	40	48
'55.....	80	$\bar{1}\cdot903$	31	39	39	48
1856.....	82	$\bar{1}\cdot916$	36	44	40	48
'57.....	85	$\bar{1}\cdot928$	39	46	43	51
'58.....	76	$\bar{1}\cdot878$	35	46	37	49
'59.....	77	$\bar{1}\cdot884$	35	46	37	49
'60.....	79	$\bar{1}\cdot898$	30	46	39	50
1861.....	78	$\bar{1}\cdot894$	36	46	38	49
'62.....	79	$\bar{1}\cdot900$	42	52	39	49
'63.....	78	$\bar{1}\cdot894$	43	55	39	50
'64.....	78	$\bar{1}\cdot894$	44	56	42	53
'65.....	78	$\bar{1}\cdot890$	44	56	42	54

VIII.—*Proportional Variation of Prices from* 1782.

Year.	Metals. Copper, Lead, Tin, Iron.		Iron. Several Varieties.		Timber.		Oils.		Dye Materials.	
	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.
1782	100	100	100	100	100	100	100	100	100	100
'83	100	100	97	97	108	107	94	94	92	91
'84	90	98	72	78	54	58	96	104	98	106
'85	89	99	67	74	73	81	104	115	90	99
1786	95	112	84	100	58	69	91	107	69	81
'87	93	107	72	82	61	70	87	100	75	86
'88	96	109	73	83	58	67	81	93	78	89
'89	93	109	78	91	58	69	84	98	73	85
'90	92	106	76	87	56	65	88	101	64	74
1791	100	113	92	104	85	96	82	92	77	87
'92	108	116	92	99	73	79	86	92	79	85
'93	113	115	91	92	70	71	103	104	79	80
'94	111	114	94	96	78	80	103	106	81	83
'95	108	93	86	74	108	93	124	106	109	93
1796	117	94	101	81	105	84	134	107	116	93
'97	123	111	124	113	77	70	120	108	96	87
'98	122	104	127	108	98	84	123	105	137	116
'99	127	98	126	97	120	93	134	104	125	97
1800	135	96	115	82	168	119	122	87	101	72
1801	139	99	139	99	167	119	134	95	108	77
'02	137	125	119	108	125	114	102	92	83	76
'03	144	115	118	94	182	146	124	100	128	103
'04	147	124	116	98	152	128	115	97	105	89
'05	161	122	118	89	146	111	131	100	135	102
1806	169	130	123	95	136	105	132	101	131	101
'07	152	118	116	90	168	131	125	96	113	88
'08	155	107	113	78	253	175	166	115	116	80
'09	159	101	114	73	533	340	162	103	110	70
'10	142	100	99	70	300	211	141	99	157	111
1811	148	109	106	78	381	281	136	100	107	79
'12	118	98	88	73	306	254	120	99	91	75
'13	111	97	81	71	185	161	115	100	82	71
'14	113	99	77	68	197	172	113	99	132	116
'15	115	105	81	74	161	148	114	104	106	97
1816	96	105	71	78	116	127	82	90	68	75
'17	107	92	78	67	115	99	124	106	86	73
'18	119	91	98	75	134	102	129	98	95	72
'19	113	101	104	93	138	124	100	90	80	72
'20	106	103	95	92	113	110	105	101	69	67

Note.—The *actual* variation is shown by the average proportion of gold prices in each year to the gold prices of 1782. The *comparative* variation is the ratio in which the prices of each commodity or group of commodities have risen or fallen more than the whole forty commodities.

VIII.—*Proportional Variation of Prices—Contd.*

Year.	Metals. Copper, Lead, Tin, Iron.		Iron. Several Varieties.		Timber.		Oils.		Dye Materials.	
	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.
1821	101	107	82	87	116	123	89	94	74	78
'22	100	113	74	83	101	115	93	105	89	101
'23	107	121	78	88	137	155	85	96	96	108
'24	108	123	94	106	126	143	78	88	83	94
'25	123	119	114	110	133	129	86	84	98	95
1826	111	124	100	111	107	119	81	90	70	79
'27	103	114	86	96	95	105	82	90	73	81
'28	95	117	80	98	93	115	75	92	61	75
'29	89	113	72	91	101	128	78	98	59	75
'30	81	100	66	82	98	121	86	106	56	69
1831	80	98	63	77	104	126	90	110	49	59
'32	77	99	61	78	108	139	79	101	47	60
'33	82	109	65	87	106	141	79	105	43	57
'34	87	112	65	83	106	137	75	96	47	61
'35	90	111	64	79	116	145	78	97	48	60
1836	114	132	86	100	126	146	93	108	46	53
'37	97	116	74	89	119	142	89	107	49	59
'38	96	114	77	92	111	132	92	109	52	62
'39	94	102	77	83	111	120	92	100	59	64
'40	87	100	63	72	—*	—	91	105	47	54
1841	90	106	61	71	113	133	97	115	40	47
'42	80	107	51	68	113	151	96	127	33	44
'43	71	100	43	61	85	120	89	125	36	51
'44	74	107	43	63	84	122	79	114	34	50
'45	86	117	59	80	96	130	84	114	35	48
1846	90	121	60	81	90	122	86	116	36	48
'47	90	115	60	76	91	116	99	127	35	45
'48	77	113	47	69	84	124	95	141	30	45
'49	73	114	40	63	72	112	96	150	28	44
'50	74	115	37	58	66	103	91	142	30	46
1851	73	112	36	54	68	103	90	137	31	47
'52	80	124	40	63	62	96	84	130	31	48
'53	103	138	53	72	81	109	95	128	37	50
'54	109	131	60	72	87	105	121	146	38	46
'55	104	130	51	64	88	110	117	146	31	38
1856	109	132	55	66	78	95	110	134	35	42
'57	108	127	51	60	84	99	113	133	36	43
'58	96	127	46	62	69	92	96	127	36	48
'59	97	127	42	55	70	92	101	132	32	42
'60	95	121	40	51	70	88	105	132	32	40
1861	88	112	37	47	69	89	111	142	32	41
'62	85	107	35	44	72	90	113	142	35	44
'63	85	108	37	47	74	95	107	137	34	43
'64	92	117	44	57	73	94	98	125	35	45
'65	81	105	39	51	74	96	90	115	34	44

* Uncertain from interference of customs duties; the uncertainty extends to the succeeding in relation to the preceding numbers.

VIII.—*Proportional Variation of Prices from* 1782.

Year.	Fibres. Cotton, Wool, Silk, Flax.		Cotton. Several Varieties.		Corn. Wheat, Barley, Oats, Rye, Beans, Peas.		Wheat. "Gazette" Average.		Fodder. Hay, Clover, Straw.	
	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.
1782	100	100	100	100	100	100	100	100	—	—
'83	112	111	102	102	127	126	110	110	—	—
'84	93	101	61	66	116	126	102	110	—	—
'85	107	118	84	93	104	115	88	97	—	—
1786	108	128	86	101	105	124	81	96	—	—
'87	107	123	91	105	102	117	86	99	—	—
'88	107	123	96	110	99	114	94	108	—	—
'89	93	110	57	67	105	123	107	126	—	—
'90	90	115	66	77	117	136	111	129	—	—
1791	96	109	64	72	112	126	99	111	—	—
'92	109	117	81	87	110	118	87	94	—	—
'93	103	105	76	77	129	131	100	101	—	—
'94	88	90	68	70	140	144	106	109	—	—
'95	103	89	79	68	168	144	152	131	—	—
1796	126	101	115	92	153	123	160	128	—	—
'97	118	107	92	83	112	101	109	99	— *	— *
'98	130	111	139	118	116	99	105	90	118	100
'99	172	133	204	157	159	122	140	108	171	132
1800	143	102	116	82	252	179	231	164	235	167
1801	142	101	114	81	232	165	222	159	244	174
'02	132	120	94	86	130	118	131	119	164	149
'03	149	120	86	69	123	98	116	93	230	185
'04	149	125	86	73	134	113	123	104	191	161
'05	155	118	100	76	177	134	177	134	162	123
1806	144	111	93	71	158	122	156	120	181	139
'07	150	117	85	66	168	131	149	115	233	181
'08	168	116	105	73	195	135	160	111	230	159
'09	214	137	103	65	205	131	192	123	214	137
'10	165	116	86	60	175	124	187	132	242	171
1811	149	110	66	49	167	123	178	131	308	228
'12	147	122	70	58	221	183	209	173	203	169
'13	134	117	83	72	197	172	172	150	182	159
'14	131	114	111	97	123	108	113	99	167	146
'15	138	126	94	86	114	104	111	101	166	152
1816	106	116	87	96	123	135	132	146	222	244
'17	140	120	110	94	192	165	191	164	224	192
'18	161	122	106	80	203	155	170	129	252	192
'19	118	105	67	60	177	159	144	129	254	228
'20	121	117	61	60	148	144	134	130	171	166

* Quotations of fodder previous to 1797 were wanting; the ratios were therefore made to commence from the general average of all commodities for 1797.

VIII.—*Proportional Variation of Prices—Contd.*

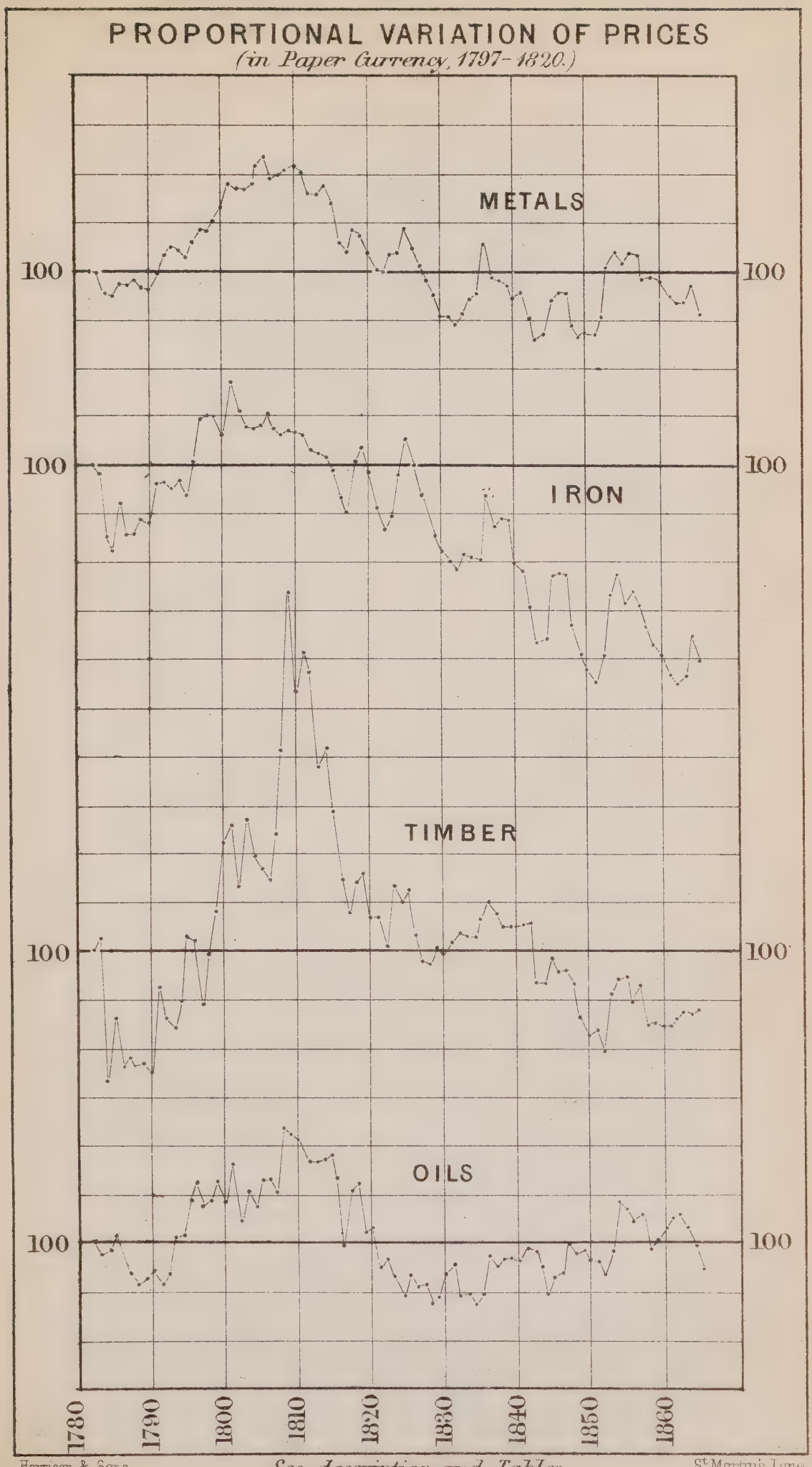
Year.	Fibres. Cotton, Wool, Silk, Flax.		Cotton. Several Varieties.		Corn. Wheat, Barley, Oats, Rye, Beans, Peas.		Wheat. "Gazette" Average.		Fodder. Hay, Clover, Straw.	
	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.	Actual.	Comparative.
1821	112	119	53	56	116	123	114	121	182	193
'22	110	125	47	53	92	105	90	102	170	193
'23	115	129	46	52	125	140	108	122	215	243
'24	103	116	48	54	147	167	130	147	250	283
'25	121	117	63	61	157	152	139	135	—	—
1826	86	96	40	45	152	169	119	132	—	—
'27	86	95	38	42	155	171	119	131	245	271
'28	83	102	34	42	136	168	123	151	197	243
'29	76	95	41	39	135	171	134	169	180	228
'30	78	96	36	45	138	171	130	162	220	274
1831	87	106	33	40	150	182	135	164	199	242
'32	82	105	35	45	130	166	119	152	210	269
'33	89	118	43	58	119	158	107	143	169	224
'34	106	136	48	62	123	158	94	121	177	228
'35	116	145	55	69	119	148	80	99	218	271
1836	111	129	53	62	131	152	98	114	185	215
'37	97	116	40	48	132	158	113	136	228	272
'38	91	108	38	46	134	160	131	156	211	252
'39	96	104	41	44	155	168	143	155	234	254
'40	92	106	36	41	150	173	135	155	200	230
1841	88	104	37	44	140	166	131	154	227	267
'42	77	103	31	41	120	160	116	155	210	280
'43	72	102	27	37	113	159	102	143	221	311
'44	79	114	27	39	125	180	104	150	173	251
'45	81	110	24	33	130	176	103	140	233	316
1846	83	112	28	37	140	188	111	149	200	269
'47	77	98	29	37	176	224	142	181	180	230
'48	61	90	21	31	125	184	103	151	173	256
'49	62	96	23	36	106	166	90	140	177	277
'50	76	119	32	50	94	146	82	127	156	243
1851	77	117	27	41	98	150	78	119	163	248
'52	76	118	25	39	109	169	83	128	176	273
'53	77	104	24	33	127	170	108	146	189	254
'54	75	90	24	30	157	189	147	177	226	272
'55	75	94	26	32	154	193	151	189	217	272
1856	89	108	30	36	151	184	140	170	221	268
'57	98	116	36	43	142	168	114	135	191	225
'58	87	115	32	43	128	169	90	119	194	257
'59	97	127	33	43	125	163	89	116	198	258
'60	95	121	30	37	136	172	108	137	214	271
1861	96	122	39	50	135	172	113	144	213	272
'62	111	140	82	104	131	165	113	142	210	264
'63	127	161	117	150	119	152	91	116	199	254
'64	129	164	128	164	109	139	81	104	199	254
'65	120	155	77	100	107	138	78	101	229	295

IX.—*Description of the Diagrams.*

Each point on a curve has been laid down at a distance from the thick zero line, representing a ratio of prices of the year to the prices of 1782, on the scale of one quarter of an inch to the logarithm ·100. The horizontal reference lines represent, from below upwards, the logarithms $\bar{1}\cdot500$, $\bar{1}\cdot600$, $\bar{1}\cdot700$, $\bar{1}\cdot800$, $\bar{1}\cdot900$, $0\cdot000$, $0\cdot100$, $0\cdot200$, $0\cdot300$, &c. Since the logarithm of 2 is nearly ·300 (·30103) and that of $\frac{1}{2}$, $\bar{1}\cdot700$, the third line above the zero line represents a *doubled* price, the third line below it a halved price.

In the case of the general variation of all the commodities, horizontal lines representing the ratios in common numbers have been substituted for the logarithmic lines, the logarithmic scale however being preserved.

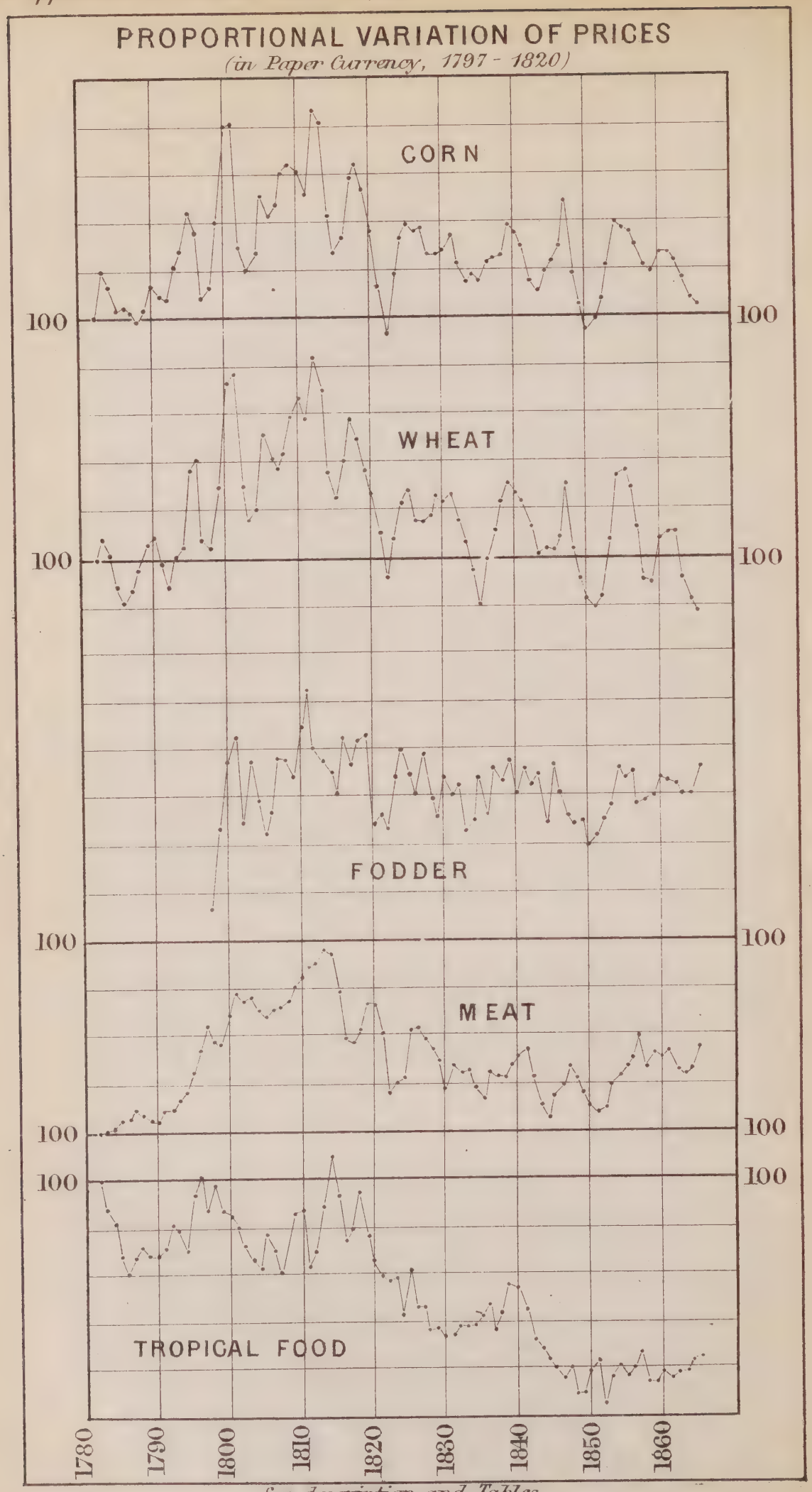
The diagrams are intended only to show the general character of the variations, the numerical results being given in the tables. It has not been thought needful to draw out the comparative variations except in a few cases.



Harrison & Sons

See description and Tables.

St. Martin's Lane



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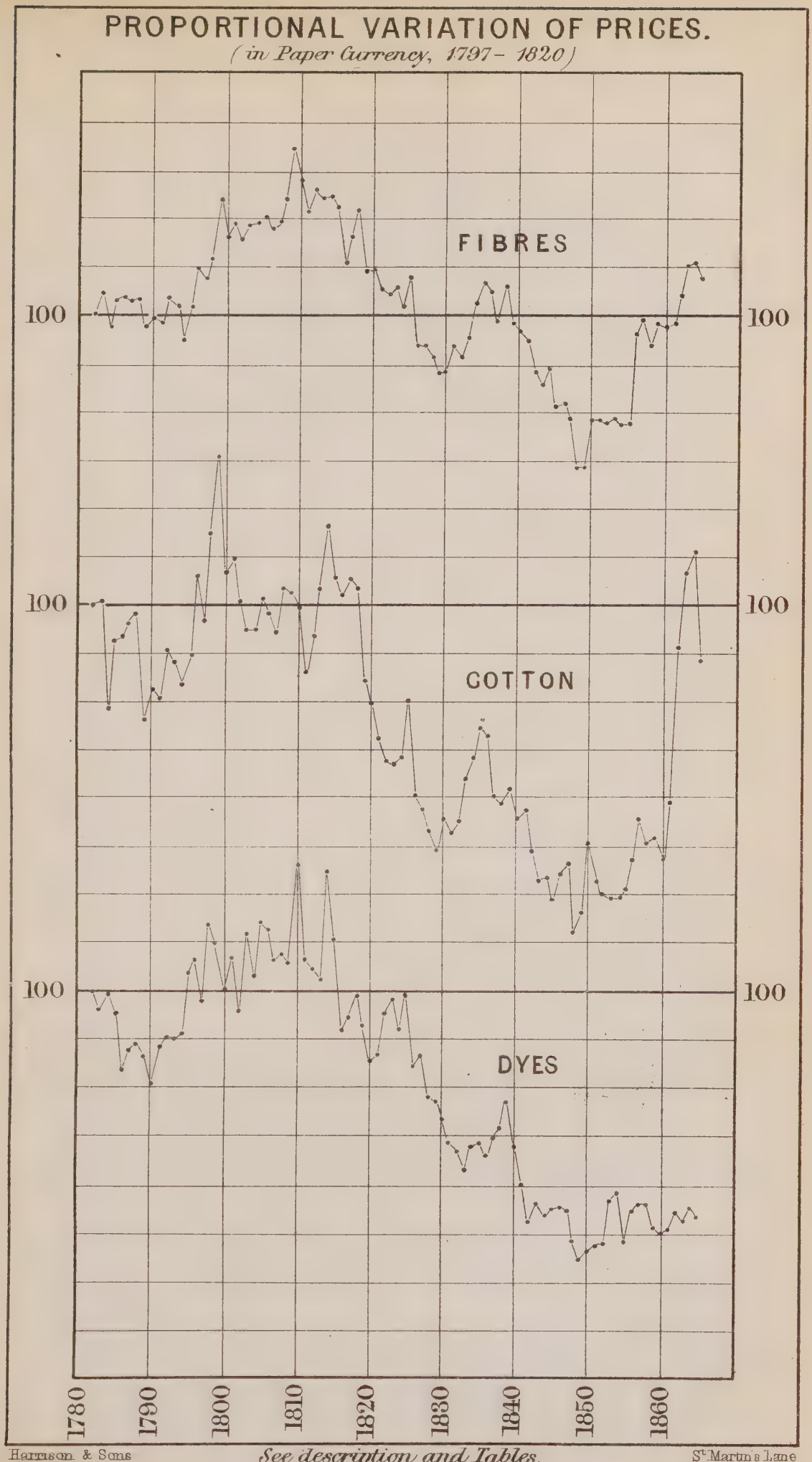

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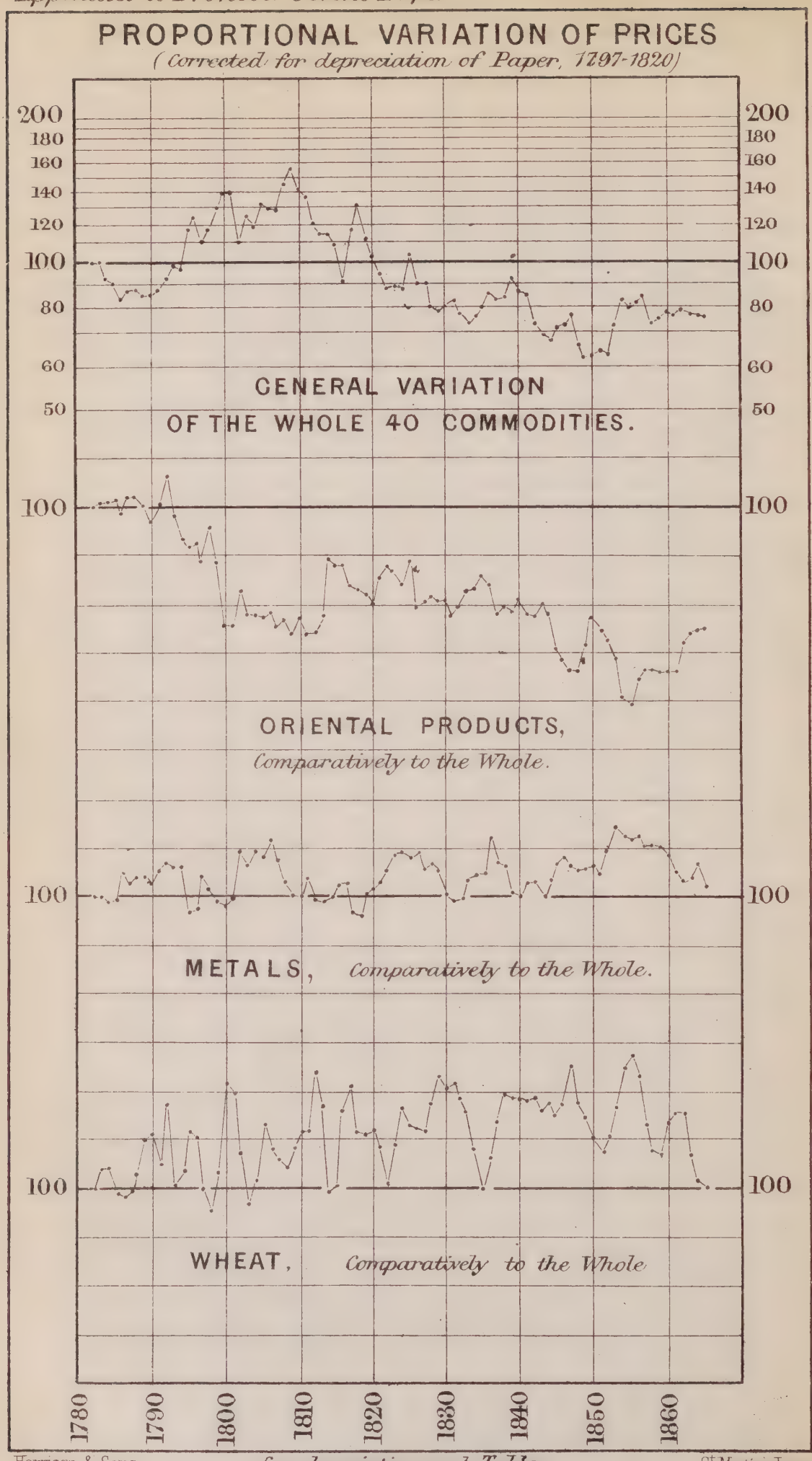

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I.—*On a Form of Savings Banks among the Christians of Asia Minor.* *By* Hyde Clarke, F.S.S.

My attention has often been called to the employment of Church institutions here for the investment of money by the poorer classes of the Christians, and particularly by the Greek servant girls. In Smyrna itself there are many thousand Greek girls from the Archipelago and Ionian Islands employed as servants. Many of these girls save up their money wages, and it may be added clothes wages, and if they do not marry here, return to the islands with their savings. A common mode of hiring is to pay a portion in money and a portion in certain stipulated articles of clothing, including shoes, and of these things the girls wear as few as possible. The wages now are about 10*l.* a-year altogether.

Where there are several immigrant members of a family, the savings are sent home occasionally by one of them paying a periodical visit or returning, but in the case of those having no connections, or being orphans, the money is deposited with the "Church."

This has gone on in this city for a very long while, beyond all memory, and prevails throughout Turkey among Greeks and Armenians.

Although effecting the purpose of a savings bank, and even of a benefit society, the operation is not exactly of that form. The money is considered as lent to the "Church," but the church is not absolutely obliged to receive all money tendered.

The Greek institutions receiving money here are the churches, the hospital, and the school, and they are very ably managed by lay committees in the nature of vestries, the members of which are styled Ephoroi, and are elected by the congregations or community. The clergy have no part in the management, a trait in perfect keeping with the Greek character, although their devotion to the priesthood is very great.

The deposits are considered as loans for the respective institutions, on the improvement of which, since the return of the Greeks to Turkey after the War of Independence, large sums have been spent. The total amount of debt was formerly larger, and consisted

of positive loans from the wealthy classes, as in many of the provincial districts now, but in consequence of the prosperity of the community the amount of the debt is now small, and it consists in reality of deposits, often tendered under pressure, and advocated as an act of charity towards the depositor. From time to time, by the death of the depositors, some of these deposits have fallen into the church.

The chief of these savings banks is that of the cathedral of St. Photini, which is managed by nine *ephoroi*. The amount of deposits at present is not more than 9,000*l*. Turkish money may be deposited in sums as small as 2*l*. or 3*l*., and I believe in other churches as low as 1*l*. It is deposited for three, six, or twelve months, and a deposit receipt is given, on the production of which the money is returned even at a shorter period. The rate of interest is at present 6 per cent., but as the cathedral does not want money many depositors have been refused, and this year the vestry has been persuaded to purchase house property as an investment of these funds. Inasmuch, however, as house property of stone only brings in 4 per cent. at Smyrna, it is proposed to reduce the rate of interest on deposits to 4 per cent. instead of 6 per cent., hitherto allowed. St. Photini has a revenue of 1,500*l*. a-year from the rents, which is considered as an additional security for investors. This is exclusive of houses employed for schools. Thus the vestry has this year increased the girls school accommodation from 300 to 600 girls.

The church of St. George has about 6,000*l*. in deposit; that of St. Dimitre 5,000*l*., and the total of all the churches and the hospital is perhaps about 30,000*l*. sterling.

The depositors consider that in case of sickness, or incapacity, they have a better claim on the charity of the vestry, and the servants evidently regard the operation as that of a benefit society.

The Greek Hospital, an ably managed institution, includes accommodation for the sick and lunatics, and likewise schools. In the last three years it is estimated that 30,000*l*. have been spent in reconstructing it. The hospital likewise receives money on deposit, and further property in deposit.

The Armenian Church here renders the like services to its community.

Some of the Roman Catholic institutions receive small savings, and lend out the money in loans and mortgage, to obtain or secure converts.

The Mussulmans have nothing in the nature of a savings bank because the acceptance of interest is still regarded with prejudice, but some of the mosques receive property on deposit, as the treasuries of the Greek temples did ages ago.

The Christians of the present day, perhaps, adopted their present practice in imitation of the Turks.

The Albanian Mussulmans here employ their money in petty usury and hoard it, sending home remittances by trustworthy members who return to Albania by steamer.

It may be incidentally mentioned that the remittance of money for all classes here, is carried out faithfully on a large scale by the

Turkish post office, the money being made up in bags or groups on the old French post office plan. Through the post office money has for centuries been despatched throughout the empire.

II.—*Method of Ascertaining the Real Value of Imports.*

Mr. John A. Messenger the Inspector-General of Imports and Exports has prepared the following statement explanatory of the method adopted for ascertaining the real value of the imports into the United Kingdom. This paper has been laid before Parliament together with the note addressed to merchants and brokers from whom periodical returns of average prices were required.

"The real value of the imports into the United Kingdom, as shown in the Statistical Accounts published under the authority of the Government, is ascertained as follows:—

"1. In the case of certain articles,—of those namely, in regard to which the tariff prescribes that their value (either with or without a specification of quantity) shall be stated in the entry inwards at the Custom House,—it rests on the declaration of the importers.

"If the officer of customs to whom such declaration of value is tendered should see reason to question its correctness, he is entitled to require further evidence on the point, or he may satisfy his doubts by an examination of the goods.

"The articles of which the value is ascertained by this method, however, are but few compared with the whole number of those included in the Statistical Registry,—and they are generally of minor importance.

"2. In the case of the more numerous and more considerable articles which are entered at the Custom House by quantity alone,—the value exhibited in the statistical record is obtained by means of a process of computation which combines the quantity with the average prices of the several commodities.

"The average prices thus employed are supplied to the Inspector General of imports and exports in part by some of the leading merchants and brokers of the city of London, who willingly aid an operation so obviously serviceable to the public,—in part by three gentlemen—who have special facilities for watching the course of the markets, and who receive a fixed remuneration from the Treasury for collecting such prices in the ports of London, Liverpool, and Hull respectively.

"In striking the average price for each article, regard is had to the specific distinctions under which it is exhibited in the tariff,—these distinctions being of necessity observed also in the statistical registry,—and not being in every instance identical with those which are commonly recognized in mercantile transactions.

"As the same article, in many cases, varies widely in its market value, according to the country of which it is the produce, separate prices, applicable to the importations from the different countries, are in such cases required.

"The rules which are required to be kept in view in fixing the average prices will appear more distinctly on reference to the annexed copy of an explanatory note which was addressed to the merchants and brokers from whom assistance was sought at the time when the registry of real value was first established.

"When the prices obtained from different sources are found to disagree,—such disagreement, unless it be referable to some known cause, is made the subject of a careful investigation, before the average is finally adjusted.

"The average price of an article being fixed for a particular month for the

ports of London and Liverpool separately,—and, in the case of certain descriptions of merchandise, for the port of Hull also,—the quantity imported into each of the ports is computed at the price belonging to it, and the mean value thus ascertained of the importations into the two or the three ports, is adopted as the general rate of valuations for the importations into the kingdom at large.

"The value attached to the importations of each article for the entire year is the sum of the values affixed to the importations of each successive month.

"The manner in which the operation is effected is shown in the annexed table.

Table showing the Manner in which the Real Value of Imports is Computed in the Office of the Inspector General of Imports and Exports.

Yellow Muscovado and Brown Clayed Sugar Imported from Bengal in 1861.

Months.	Imported into London.			Imported into Liverpool.		
	Rate per Cwt.	Quantity.	Value.	Rate per Cwt.	Quantity.	Value.
	s. *d.*	Thousand cwt.	*s.*	*s.* *d.*	Thousand cwt.	*s.*
January	27 2	—	—	27 8	8	221
February	27 2	5	136	27 6	3	82
March	27 8	2	55	27 –	4	108
April	28 2	4	113	27 –	6	162
May	29 8	10	297	26 3	11	289
June	29 8	1	30	25 9	4	103
July	30 2	4	121	25 9	—	—
August	30 2	11	332	25 9	18	463
September ..	30 8	17	521	26 –	16	416
October	31 2	26	810	26 –	21	546
November	30 8	38	1,165	25 6	7	179
December ...	29 8	47	1,394	25 –	20	500

Months.	Imported into London and Liverpool jointly.		Average Price of the Imports into London and Liverpool adopted for the United Kingdom.	Quantities Imported into the United Kingdom.			Computed Real Value.
	Thousand cwt.	*s.*	*s.* *d.*	Cwt.	qrs.	lbs.	£
January	8	221	27 8	8,097	–	24	11,201
February	8	218	27 3	8,386	1	4	11,426
March	6	163	27 2	6,133	2	10	8,357
April	10	275	27 6	9,565	2	15	13,153
May	21	586	27 11	20,986	–	20	29,293
June	5	133	26 6	4,568	2	9	6,053
July	4	121	30 2	3,982	2	15	6,007
August	29	795	27 5	28,476	1	3	39,036
September	33	937	28 4	33,002	–	5	46,753
October	47	1,356	28 10	46,559	2	26	67,124
November	45	1,344	29 10	45,466	–	1	67,820
December	67	1,894	28 3	66,342	–	12	93,708
				281,566	1	4	399,931

Note.—Average price of the year, 28*s.* 5*d.* per cwt.

Linseed Imported from the Russian Ports on the Black Sea in 1861.

Months.	Imported into London.			Imported into Hull.		
	Rate per Quarter.	Quantity.	Value.	Rate per Quarter.	Quantity.	Value.
	s. *d.*	Thousand qrs.	*s.*	*s.* *d.*	Thousand qrs.	*s.* *d.*
January	56 –	—	—	55 –	—	—
February	50 –	2	100 –	50 –	17	850 –
March	51 –	—	—	47 6	31	1,472 6
April	50 6	1	50 6	47 6	19	902 6
May	51 6	2	103 –	47 6	2	95 –
June	51 6	—	—	47 6	1	47 6
July	52 9	—	—	47 6	—	—
August	55 8	—	—	50 –	6	300 –
September....	57 6	2	115 –	52 6	13	682 6
October.....	59 6	5	297 6	55 –	21	1,155 –
November	60 6	2	121 –	55 –	14	770 –
December	61 –	20	1,220 –	55 –	20	1,100 –

Months.	Imported into London and Hull jointly.		Average Price of the Imports into London and Hull, adopted for the United Kingdom.	Quantities Imported into the United Kingdom.	Computed Real Value.
	Thousand qrs.	*s.*	*s.* *d.*	Qrs.	£
January	—	—	55 6	6,629	18,395
February	19	950 –	50 –	21,563	53,907
March	31	1,472 6	47 6	56,061	133,145
April	20	953 –	47 6	29,324	69,645
May	4	198 –	49 6	6,880	17,028
June	1	47 6	47 6	1,526	3,624
July	—	—	50 1	3,576	8,940
August	6	300 –	50 –	10,059	25,148
September....	15	797 6	53 2	29,449	78,040
October	26	1,452 6	55 10	36,048	100,634
November	16	891 –	55 8	35,897	99,913
December	40	2,320 –	58 –	54,490	158,021
				291,502	766,440

Note.—Average price of the year, 52*s.* 7*d.* per quarter.

Explanatory Note referring to a Classified "List of Articles Imported into "the United Kingdom for which Rates of Valuation are desired."

"The object for which it is sought to attach rates of valuation to the various commodities enumerated in this list, is the ascertainment (as nearly as possible) of the true money equivalent of our imports, considered both collectively and in the detail of individual articles, and with reference as well to the trade carried on with particular countries and colonies as to the general commerce of the kingdom with all parts of the world.

"The rates, when obtained, are to be applied to the quantities of the several commodities as they appear in the records kept by the Inspector-General of Imports

and Exports, which records, being founded upon the entries passed by the merchants at the Custom House, exhibit the articles imported from all countries under those designations and distinctions, and those alone, which are recognized in the Customs tariff.

"Hence, estimates of value adapted to a different specification of the same articles, to varieties of fabric or degrees of quality of which the Customs tariff takes no cognizance, would not be available for the purpose which this inquiry has in view.

"On the other hand, it is important that any well-defined differences in the price of a commodity affecting the whole produce of *particular countries* should be noted, since a neglect of such differences would lead to a false representation of the comparative value of the trade carried on with those countries respectively.

"What is required, therefore, is in general a single rate of valuation, but in particular instances more than one rate, corresponding as nearly as possible with the average market price of the article in the United Kingdom during a given period for each description of merchandise included in the accompanying list;—a *single* rate wherever the same average price may be deemed fairly applicable to the importations from all countries alike;—*separate* rates for the importations from different countries where the nature of the case requires that they should be so discriminated.

"The distinctions which are conceived to be necessary in regard to the produce of particular countries are indicated in the list under the heads to which they belong, but a practical knowledge of the various commodities will probably suggest other distinctions of the same kind as necessary to be introduced, and point out some of those which are inserted as unnecessary to be retained.

"The articles have been distributed into classes with the view of facilitating the process by which values are to be affixed to them. The division is of course an arbitrary one, and where it seemed that an article might almost indifferently be assigned to either of two classes it is inserted in both."

III.—*The Import and Export Trade of* 1862-63-64.

The following statistics have been abstracted from an article which appeared recently in the *Manchester Guardian* on the Trade of the United Kingdom.

Computed Real Value of the Principal Articles Imported into the United Kingdom, Three Years ended with 1864.

	£
1862	185,301,000
'63	204,534,000
'64	226,058,000

"Though there was a considerable contraction both of the import and export trade comparing the last three months of 1864 with the corresponding season of 1863, yet so great had been the transactions of the earlier portions of last year, that 1864 overtopped 1863 in its value of imports by 21,500,000*l.*; and 1862 by 41,000,000*l.* The foreign and colonial merchandise here represented is exclusive of what is technically termed 'unenumerated' articles, which we find from the annual blue book amounted, in 1862, to 40,416,000*l.*, and in 1863, the latest account yet given, to 44,386,000*l.*

Declared Value of British and Irish Produce and Manufactures Exported, Three Years ended with 1864.

	£
1862	123,992,000
'63	146,602,000
'64	160,436,000

"The export trade during the latter part of 1864 appears to have been affected in a less degree by the condition of the money market than the import trade. We see that last year exceeded 1863 by 14,000,000*l.* nearly, and 1862 by 36,400,000*l.* Twelve years since, that is, in 1852, the aggregate value of this branch of our commerce was 78,000,000*l.*; hence comparing these figures with those of 1864, we find an increase of 105 per cent.

"But the money exponents of our import and export transactions during the three past years have been enormously swollen by the increased value of the cotton trade. It is, therefore, necessary to a clear understanding of the returns we are quoting, that this trade be shown separately.

Value of Raw Cotton Imported, and of Manufactured Cotton Exported, Three Years ended with 1864.

	Imports.	Exports.	Total Trade.
	£	£	£
1862	31,093,000	30,549,000	61,642,000
'63	56,278,000	39,524,000	95,802,000
'64	78,204,000	45,760,000	123,964,000

"Now deducting the cotton from the general imports, it will be found that the residual values are these, viz. 154,000,000*l.* in 1862, 148,000,000*l.* in 1863, and 148,000,000*l.* in 1864. Hence both 1863 and 1864 were 6,000,000*l.* under 1862. The exports, however, treated in the same way, show a decided increase. Thus in 1862 they amounted to 93,500,000*l.*, in 1863 to 107,000,000*l.* and in 1864 to 115,000,000*l.* Hence last year exceeded 1863 by 8,000,000*l.*, and 1862 by 21,500,000*l.*, leaving the value of the raw cotton shipped for foreign and colonial marts out of the comparison. It will be observed that in 1862 the value of the raw cotton imported was balanced very nearly by the value of cotton manufactures exported, that in 1863 the imports were nearly 17,000,000*l.* in *excess* of the exports, and that in 1864 the excess was 32,500,000*l.* The value of the raw cotton exported is not given in the monthly accounts. The quantities were, however, as follows:—

	Cwt.
1862	1,917,094
'63	2,154,933
'64	2,184,842

"The traffic which consists of the re-shipment of foreign and colonial merchandize is only represented in the annual statements to which we have already referred, and, as they are not yet issued for 1864, we must be content with the following table. In 1860 the value of the trade was 28,600,000*l.*; in 1863 it had grown to 50,300,000*l.* A large amount was contributed to this augmentation by the enhanced price of the raw cotton exported.

Computed Real Value of Foreign and Colonial Produce and Manufactures Exported from the United Kingdom, Three Years ended with 1863.

	£
1861	34,530,000
'62	42,176,000
'63	50,300,000

"The value of raw cotton exported in 1861 was 8,578,000*l.*, in 1862 it was 13,509,000*l.*, and in 1863 it rose to 20,104,000*l.* Here we find how largely these values have operated upon the total of this class of exports as represented in the last table.

"We have now to consider briefly, but compendiously the bullion trade for the three years last past, or so much of it rather, as the officers of Customs chronicle :—

Computed Real Value of Gold and Silver Bullion and Specie Imported into the United Kingdom and Exported therefrom, Three Years ended with 1864.

	Value.	
Imported—	£	£
Gold, 1862	19,904,000	
Silver, ,,	11,753,000	
		31,657,000
Gold, 1863	19,143,000	
Silver, ,,	10,888,000	
		30,031,000
Gold, 1864	16,901,000	
Silver, ,,	10,827,000	
		27,828,000
Exported—		
Gold, 1862	16,012,000	
Silver, ,,	13,314,000	
		29,326,000
Gold, 1863	15,303,000	
Silver, ,,	11,241,000	
		26,544,000
Gold, 1864	13,280,000	
Silver, ,,	9,877,000	
		23,157,000

"From these records it is at once apparent that both the import and export trade in the precious metals has been declining since 1862 ; and also that each year shows a large balance of imports. Thus in 1862 the surplus was 2,330,000*l.* ; in 1863, it was 3,500,000*l.* ; and last year 4,670,000*l.* ; together 10,500,000*l.* This balance is made up of gold, because it will be found that we parted with more silver than we received in the period. Our total imports of silver were 33,468,000*l.*, and the total exports 34,432,000*l.*, or nearly 1,000,000*l.* more. The supply of silver has been steadier than that of gold. The former, in 1864, was 926,000*l.* less than in 1862; but the latter metal was 3,000,000*l.* less comparing the same years.

"We may now summarise the figures for 1864, by bringing together under each head the values which respectively denote the extent of the import and of the export business of the United Kingdom. The totals in the subjoined statement are no doubt rather below the full amount ; because, under "imports," the value of the unenumerated articles is given for 1863, and under "exports" the value of foreign and colonial produce, &c. is also, for lack of later information, given for 1863.

Trade of the United Kingdom in 1864, *as shown by the Value of the Imports and Exports.*

Imports—	£
1. Principal articles *enumerated*	226,058,000
2. Principal articles *unenumerated* (say)	45,000,000
3. Gold and silver	27,828,000
	298,886,000
Exports—	
1. British and Irish produce and manufactures	160,436,000
2. Foreign and colonial produce, &c. (say)	50,300,000
3. Gold and silver	23,157,000
	233,893,000

"Here then the final result discloses itself in unprecedented figures; our imports, using round numbers, were 299,000,000*l.*; and our exports 234,000,000*l.*, and the total trade of the branches for the year 1864 was 533,000,000*l.* sterling."

IV.—*The Consumption of Raw Cotton and the Price of Raw and Manufactured Cotton*, 1860-64.

The enormous fluctuations which have occurred in the cotton trade, in consequence of the Civil War in America, are shown with great minuteness in a sheet of statistics published by Messrs. Pender and Co., of Manchester; from that document the subjoined figures have been taken :—

A.—*Consumption of Cotton in* 1860 (*the year of largest consumption ever known*).

	Bales.	Bales.
Stock in ports of Great Britain 1st January, 1860	469,500	
,, hands of spinners	90,000	
Imported in 1860	3,366,500	
		3,926,000
Exported in 1860	608,400	
Stock in ports 1st January, 1861	594,400	
,, hands of spinners	200,000	
		1,402,800
Total consumption in Great Britain in 1860		2,523,200

Average weight of bales of all sorts 429 lb., or per week 48,523 bales. But deducting 15 per cent. for dirt in East Indian cotton in 1860, it makes the consumption 2,497,180 bales, or 48,022 per week.

B.—*Consumption of Cotton in* 1864.

	Bales.	Bales.
Stock in ports of Great Britain 1st January, 1864	327,500	
,, hands of spinners	50,000	
Imported in 1864	2,587,120	
		2,964,620
Exported in 1864	732,280	
Stock in ports 1st January, 1865	575,700	
,, hands of spinners	90,000	
		1,397,980
Total consumption of Great Britain in 1864		1,566,640

Average weight of bales consumed 357 lbs., or per week 30,121 bales. But at the average weight of cotton bales consumed (in 1860) it would be 1,303,705

bales, and by deducting 15 per cent. for dirt in East Indian cotton, viz., 110,970, it makes the total consumption in 1864 (of actual cotton) 1,192,735 bales, or 22,936 bales per week.

C.—*Price of Cotton in Liverpool at the close of each Month.*

	Uplands, Fair.					New Orleans, Fair.				
	1860.	1861.	1862.	1863.	1864.	1860.	1861.	1862.	1863.	1864.
	d. d.	d.	d.	d.	d.	d. d.	d.	d.	d.	d.
January	7 to 7 1/8	7 5/8	13 1/4	24	28	7 1/2 to 7 5/8	8	14 1/4	26	28
February....	7 „ 7 1/8	7 1/4	13 1/4	23 1/2	27	– „ 7 3/4	7 5/8	14 1/4	25 1/2	27 1/2
March	– „ 7	7 5/8	13	24	26 1/2	– „ 7 3/4	7 7/8	13 1/8	25	27
April	7 „ 7 1/8	7 7/8	13 3/4	23 1/2	28 1/4	– „ 7 3/4	8 1/4	14 1/2	24 1/2	28 3/4
May.....	7 1/8 „ 7 1/4	8 1/4	13	24 1/2	29	7 7/8 „ 8	8 1/2	14	25 1/2	29 1/2
June	6 7/8 „ 7	8 3/8	15 1/4	23	30 1/4	7 3/4 „ 7 7/8	8 3/4	16	24	31
July	6 3/4 „ 6 7/8	8 5/8	18 1/4	23	32	7 1/2 „ 7 5/8	9	19	24	33
August	6 7/8 „ 7	9 1/2	27 1/2	24 1/2	31 1/2	7 3/8 „ 7 1/2	9 3/4	28 1/2	25 1/2	32 1/2
September	7 „ 7 1/8	10 1/2	26 1/2	27	28	– „ 7 5/8	10 5/8	28 1/2	27 1/2	29
October	7 1/8 „ 7 1/4	12 3/8	23	29 1/4	24	7 5/8 „ 7 3/4	12 3/4	25	29 1/2	25
November	7 1/4 „ 7 3/8	12	24	27 3/4	26 3/4	– „ 7 5/8	12 1/2	26	28	27 1/2
December	7 1/2 „ 7 5/8	12 1/2	25 1/2	27 1/2	27 1/2	7 7/8 „ 8	13	27 1/2	28	28 1/2

	Sea Island.				
	1860.	1861.	1862.	1863.	1864.
	d. d.	d. d.	d. d.	d. d.	d. d.
January	10 1/2 to 26	13 to 24	20 to 36	30 to 46	30 to 46
February....	10 1/2 „ 26	13 „ 24	20 „ 36	30 „ 46	30 „ 46
March	10 1/2 „ 26	12 „ 24	20 „ 36	30 „ 46	30 „ 46
April	10 1/2 „ 26	12 „ 24	20 „ 36	30 „ 46	37 „ 44
May.....	10 1/2 „ 26	12 „ 24	20 „ 40	30 „ 46	37 „ 45
June	10 1/2 „ 26	12 „ 26	22 „ 45	30 „ 46	38 „ 46
July.....	10 1/2 „ 26	13 „ 26	26 „ 50	30 „ 46	40 „ 50
August	10 1/2 „ 26	13 „ 26	31 „ 50	30 „ 46	39 „ 49
September	10 1/2 „ 26	13 1/2 „ 30	38 „ 55	30 „ 46	37 „ 48
October	10 1/2 „ 26	15 „ 32	38 „ 55	30 „ 46	37 „ 48
November	10 1/2 „ 26	17 „ 40	35 „ 55	30 „ 46	40 „ 50
December	11 „ 26	15 „ 35	38 „ 66	48 „ 54	40 „ 50

	Pernambuco.				
	1860.	1861.	1862.	1863.	1864.
	d. d.	d. d.	d. d.	d. d.	d. d.
January	6 7/8 to 8 3/4	8 to 10 1/2	12 to 14 1/2	21 to 22 1/2	27 to 28
February....	7 1/2 „ 8 3/4	7 7/8 „ 10 1/4	12 „ 14 1/2	19 „ 21	27 „ 27 1/4
March	7 1/8 „ 9	7 7/8 „ 10 1/4	12 „ 14	18 „ 21	25 1/2 „ 26 1/2
April	7 1/2 „ 9	7 3/4 „ 10	12 „ 14	19 „ 22	26 1/4 „ 28 1/2
May.....	9 3/8 „ 9	8 1/4 „ 10	11 1/4 „ 13 1/2	21 „ 23	27 „ 28 3/4
June	7 „ 9	8 1/4 „ 10	13 „ 15	21 „ 22	27 1/2 „ 29 3/4
July.....	7 „ 9	8 1/4 „ 10	16 1/2 „ 18 1/2	21 „ 22 1/2	29 1/2 „ 32
August	7 „ 9	8 1/4 „ 10	25 „ 28	22 „ 24	28 3/4 „ 31 1/2
September	7 1/4 „ 9	9 „ 10 3/4	23 1/2 „ 29	25 1/2 „ 28	23 1/2 „ 25
October	7 3/8 „ 9	10 3/4 „ 12	21 „ 26	29 „ 30	20 1/2 „ 22 1/2
November	7 3/4 „ 10 1/2	11 3/4 „ 14	19 1/2 „ 23	28 1/2 „ 29 1/2	26 „ 27 1/4
December	8 1/4 „ 10 1/2	11 1/2 „ 13 1/2	22 1/2 „ 25 1/2	27 1/2 „ 28 1/4	25 3/4 „ 26 3/4

C.—*Price of Cotton in Liverpool—Contd.*

Egyptian.

	1860.	1861.	1862.	1863.	1864.
	d. *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*
January	7 to 12	7¾ to 11	10½ to 18	20 to 22½	— to 27½
February....	7 ,, 14	7½ ,, 11	10 ,, 20	19 ,, 20½	— ,, 26¾
March	7½ ,, 14	7½ ,, 11	10 ,, 20	19½ ,, 21½	— ,, 26¼
April	7½ ,, 14	7½ ,, 11	10½ ,, 20	19 ,, 21	26½ ,, 29
May.....	7½ ,, 14	7¾ ,, 11	10½ ,, 24	19½ ,, 21½	26 ,, 29¼
June	7½ ,, 14	7¾ ,, 11	13 ,, 26	19 ,, 20¾	26 ,, 29½
July.....	7¼ ,, 14	7¾ ,, 12	16 ,, 26	19 ,, 20¾	27 ,, 31¼
August	7 ,, 14	8 ,, 12	24 ,, 32	21 ,, 23½	26½ ,, 30¾
September	7½ ,, 14	8¾ ,, 12	19 ,, 33	25 ,, 27	16 ,, 24
October	7½ ,, 14	10¼ ,, 16	12 ,, 30	29 ,, 29½	11 ,, 22½
November	7¼ ,, 14	11 ,, 16	12 ,, 30	28 ,, 28½	19 ,, 27½
December	7¼ ,, 13	10 ,, 15	18 ,, 32	27½ ,, 29	20 ,, 27½

East Indian.

	1860.	1861.	1862.	1863.	1864.
	d. *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*
January	3 to 5¾	4¼ to 6	6⅜ to 11	12 to 18½	15 to 25
February....	3 ,, 5¾	3⅞ ,, 5¾	6½ ,, 11¼	10 ,, 18	15 ,, 24
March	3 ,, 5¾	4 ,, 5⅞	6¼ ,, 11¼	10½ ,, 18	12 ,, 24
April	2½ ,, 5½	4 ,, 6	6¾ ,, 11	11 ,, 19	12 ,, 22½
May.....	2½ ,, 5½	4½ ,, 6⅝	6½ ,, 10¾	13 ,, 19½	12½ ,, 23½
June	2½ ,, 5½	4½ ,, 6⅝	9½ ,, 13½	12¾ ,, 18½	13 ,, 23¼
July.....	2 ,, 5¼	4½ ,, 7½	11 ,, 16½	12¾ ,, 20	14 ,, 25
August	2 ,, 5½	4¾ ,, 8	14¾ ,, 24	12¾ ,, 21¾	14 ,, 23¾
September	2½ ,, 5½	5½ ,, 9	14½ ,, 22	15½ ,, 24½	9½ ,, 19
October	2½ ,, 5½	6⅛ ,, 10	13½ ,, 20	19½ ,, 28	8 ,, 16
November	3 ,, 5¾	6¼ ,, 10¾	12 ,, 19	17½ ,, 27	10 ,, 19½
December	2¾ ,, 6	6 ,, 9½	12½ ,, 20	11½ ,, 25½	10½ ,, 20

West Indian.

	1860.	1861.	1862.	1863.	1864.
	d. *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*
January	5¾ to 9	— to 7¼	— to 11	22½ to 26	24 to 27
February....	5¾ ,, 9	—	12½ ,, 18	—	25¾ ,, 26
March	6 ,, 9	—	—	24 ,, —	25½ ,, 27¼
April	6 ,, 9	—	— ,, 12	9½ ,, 16	27½ ,, 28
May.....	6 ,, 9	7⅜ ,, 10	11½ ,, 11⅝	17½ ,, 23	28 ,, 28½
June	6 ,, 9	—	— ,, 15¼	20¾ ,, —	27 ,, 29
July.....	6 ,, 9	— ,, 8¾	— ,, 17¼	19½ ,, 20½	28 ,, 30½
August	6 ,, 9	8 ,, 10	21 ,, 24	20½ ,, 25	28 ,, 30
September	6 ,, 9	8¾ ,, 9	— ,, 30	23 ,, 40	23 ,, 25
October	6 ,, 9	— ,, 9	—	27½ ,, 30	19 ,, 21
November	6 ,, 9	—	—	26½ ,, 28	24½ ,, 26¼
December	6 ,, 9	— ,, 10	—	23½ ,, 28	25 ,, 26½

D.—*Comparative Prices of Shirtings (39 in. 37½ yds.) for the last Five Years.*

	6 lbs.										7 lbs.									
	1860.		1861.		1862.		1863.		1864.		1860.		1861.		1862.		1863.		1864.	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
January	7	4½	6	6	7	6	12	9	15	6	8	10½	8	–	9	3	15	–	18	9
February	7	4½	6	3	7	9	12	6	15	6	9	–	7	6	9	6	15	–	19	–
March	7	4½	6	1½	7	6	12	6	15	0	8	10½	7	6	9	3	15	–	18	6
April	7	3	6	4½	7	9	13	–	15	0	8	9	7	9	9	6	15	6	18	6
May	7	3	6	4½	7	7½	13	–	15	3	8	9	7	9	9	6	16	–	18	6
June	6	9	6	3	8	3	13	–	15	3	8	3	7	7½	9	7½	16	–	18	6
July	6	3	6	6	9	4½	12	9	16	–	7	10½	8	–	11	3	16	–	19	3
August	6	1½	6	6	10	9	13	–	16	–	7	7½	7	10½	11	6	16	3	19	3
September	6	3	6	9	13	6	14	6	13	6	7	7½	8	1½	15	6	16	9	16	3
October	6	6	7	4½	13	–	15	9	11	6	7	10½	8	6	15	6	18	6	14	–
November	6	4½	7	9	12	–	15	9	14	9	7	10	9	3	14	6	19	–	19	–
December	6	6	7	6	13	–	15	6	15	–	7	10	9	3	15	–	18	9	18	6

	8¼ lbs.									
	1860.		1861.		1862.		1863.		1864.	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
January	10	1½	9	6	10	9	17	6	22	–
February	10	3	8	10½	11	1½	17	–	22	–
March	10	3	8	9	11	–	17	–	22	–
April	10	3	9	–	11	–	18	–	22	–
May	10	1½	9	–	11	–	17	6	22	–
June	9	4½	8	9	11	6	17	6	22	–
July	9	3	9	3	13	–	17	6	23	–
August	8	10½	9	4½	14	6	17	9	22	9
September	9	–	9	9	18	6	20	–	19	–
October	9	6	10	3	18	–	22	9	16	6
November	9	4½	10	9	17	–	22	6	21	6
December	9	6	10	6	17	6	22	–	22	–

E.—*Comparative Prices of Yarn (Good Seconds) for the last Five Years.*

	No. 20's China Quality.					No. 40's India Quality.				
	1860.	1861.	1862.	1863.	1864.	1860.	1861.	1862.	1863.	1864.
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
January	11¼	11	13	26	30	12¾	12	15	28½	34
February	11¼	10	14	26	29	13	11	15½	27	32
March	11	10¾	14½	26	29	12¾	11½	15½	28	32
April	10⅞	11	14½	26	30	12¾	12	15¾	28	32½
May	10¾	11	14½	27	31	12½	12	15¾	28	34
June	10⅜	11	15½	25	31	11¾	12	17½	26	34
July	10¼	11¼	17½	26	32	11¼	12½	20	28	36
August	10	11½	21	27	30½	11¼	12½	26	29	35
September	10	12	25	30	25	11¼	13	31	32	30
October	10⅝	13	25	32	21	11¾	14½	31	35	24
November	10⅝	13	24	31	26	11½	14½	27	35	30
December	10	12¼	26	27	26	12	13¾	28½	33	30

MARRIAGES, BIRTHS, AND DEATHS IN THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES IN THE QUARTER ENDED 31ST DECEMBER, 1864, AND BIRTHS AND DEATHS IN THE QUARTER ENDED 31ST MARCH, 1865.

THIS Return comprises the BIRTHS and DEATHS registered by 2,200 Registrars in all the districts of England during the winter quarter that ended on March 31st, 1865; and the MARRIAGES in 12,741 churches or chapels, about 5,163 registered places of worship unconnected with the Established Church, and 641 Superintendent Registrars' offices, in the quarter that ended on December 31st, 1864.

The marriages in the fourth quarter of last year were numerous even for the Christmas season of the year. In the first quarter of the present year a birth-rate high above any example furnished by the previous ten years maintained the increase of population. The catalogue of deaths was also very heavy. A severe and protracted winter, with scarlatina and fever, swelled the mortuary returns. Under less favourable sanitary conditions the kingdom might have been ravaged by pestilence. And there is much still in our houses and towns to set in order.

ENGLAND:—MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1859-65, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1859-64:—*Numbers.*

Years.....	'65.	'64.	'63.	'62.	'61.	'60.	'59.
Marriages No.	—	180,263	173,510	164,030	163,706	170,156	167,723
Births ..... ,,	—	739,763	727,417	712,684	696,406	684,048	689,881
Deaths..... ,,	—	495,520	473,837	436,566	435,114	422,721	440,781

QUARTERS *of each Calendar Year*, 1859-65.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	—	37,948	35,528	33,953	33,274	35,150	35,382
June ..... ,,	—	44,596	44,146	40,853	42,012	43,777	42,042
Septmbr..... ,,	—	44,650	41,932	40,600	39,884	40,541	39,803
Decmbr. .... ,,	—	53,069	51,904	48,624	48,536	50,688	50,496

QUARTERS *of each Calendar Year*, 1859-65.

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	194,287	192,926	186,341	181,990	172,933	183,180	175,532
June ..... ,,	—	188,641	189,340	185,554	184,820	174,028	175,864
Septmbr..... ,,	—	180,752	173,439	172,709	172,033	164,121	168,394
Decmbr. .... ,,	—	177,444	178,297	172,431	166,620	162,719	170,091

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	140,646	143,030	128,096	122,019	121,215	122,617	121,580
June ..... ,,	—	116,899	118,121	107,392	107,558	110,869	105,631
Septmbr..... ,,	—	112,133	112,504	92,381	101,232	86,312	104,216
Decmbr. .... ,,	—	123,458	115,116	114,774	105,109	102,923	109,354

MARRIAGES.—The number of weddings in the three months ending 31st December was 53,069, or on an average 577 daily. It was greater than in any previous quarter. In London it rose from 7,811 and 7,856 in the corresponding quarter of the two previous years to 8,693. The West Riding of Yorkshire, Durham, Northumberland, and South Wales also showed by a clear increase in their marriages that the times were prosperous with them.

In Lancashire the marriages which were 6,499 in the last quarter of 1863 decreased to 6,152 in that of 1864; but they were considerably more numerous than in the same period of 1862.

The total number of marriages in the year was 180,263, or on an average 493 daily. In the previous year it was 173,510.

The marriage-rate in the year (viz., proportion of persons married to 100 of the population) was 1·736, and it was high throughout the year. The annual marriage-rate of the fourth quarter was 2·020, against an average rate of 1·963; in the ten years 1855-64 there is only one instance of a higher rate (2·026) which occurred in 1859.

BIRTHS.—In the three months that ended 31st March 194,287 children were born. The births in London were 28,059, a number almost equal to the total contribution of the two north-western counties, Cheshire and Lancashire. As with the marriages, so with the births, the increase was furnished chiefly by the metropolis, the West Riding of Yorkshire, Durham, Northumberland, and South Wales. The births in the West Riding increased as follows:—In the March quarter of 1863 they were 14,846; in that of 1864 they were 16,018, and in the present year 16,435. In Durham the numbers were 5,931; 6,394; 6,707. In Northumberland 3,275; 3,402; 3,474. In South Wales 6,217; 6,415; and 6,685. In Sunderland the births in the three periods were 950, 1,056, and 1,101. In the March quarter of the present year 1,924 children were born in the parish of Pancras, London; and in the district of Bradford in the West Riding, which contains a population almost as great, 2,193 were born in the same time.

The birth-rate of the quarter (children born to 100 persons living) was 3·768 against an average of 3·627. The result is extraordinary. In the same period of last year it was 3·740; in that of 1860 it was 3·707; but the forty quarters of the last ten years supply only another instance in which the birth-rate was as high as 3·700; and none as high as that of the last quarter.

ENGLAND:—*Annual Rates per Cent. of* PERSONS MARRIED, BIRTHS, *and* DEATHS, *during the* YEARS 1859-65, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1859-65:—*General Percentage Results.*

YEARS	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
Estmtd. Popln. of England *in thousands* in middle of each Year....	20,991	—	20,772	20,554	20,336	20,119	19,903	19,687
Persons Married Per ct.	—	1·663	1·736	1·688	1·614	1·628	1·710	1·704
Births .... ,,	—	3·464	3·561	3·539	3·504	3·461	3·437	3·504
Deaths.... ,,	—	2·216	2·385	2·305	2·147	2·163	2·124	2·239

QUARTERS *of each Calendar Year,* 1859-65.

(I.) PERSONS MARRIED:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	—	1·381	1·472	1·408	1·360	1·346	1·422	1·464
June..... ,,	—	1·687	1·724	1·726	1·614	1·678	1·766	1·716
Septmbr. ,,	—	1·605	1·704	1·616	1·582	1·570	1·614	1·602
Decmbr. ,,	—	1·963	2·020	1·996	1·890	1·906	2·012	2·026

(II.) BIRTHS:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	3·768	3·627	3·740	3·691	3·644	3·500	3·707	3·631
June .... ,,	—	3·603	3·647	3·700	3·665	3·690	3·512	3·588
Septmbr. ,,	—	3·325	3·447	3·343	3·365	3·388	3·267	3·389
Decmbr. ,,	—	3·297	3·376	3·428	3·350	3·272	3·230	3·414

(III.) DEATHS:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	2·728	2·522	2·773	2·538	2·443	2·453	2·481	2·515
June..... ,,	—	2·191	2·260	2·308	2·121	2·147	2·237	2·155
Septmbr. ,,	—	1·972	2·139	2·169	1·800	1·994	1·718	2·097
Decmbr. ,,	—	2·180	2·349	2·213	2·230	2·064	2·043	2·195

Increase of Population.—The births, as has been stated, were 194,287; and the deaths in the same period were 140,646. The excess of the former over the latter was 53,641, and represents the natural increase of the population.

But the population of the United Kingdom lost about 25,000 by emigration in the quarter that ended 31st March; and of these about 8,903 were persons of English origin. The total emigration (including foreigners) from British and Irish ports where there are emigration officers was 27,513 persons,* and showed a great decrease on that of the same quarter in 1863, which was 37,806 and a still greater as compared with the number last year, which was 41,037. The emigration to the United States was little more than half of that which took place in the March quarter of 1864.

Of 17,865 emigrants who went to the United States in the present year, about 3,700 were English, 800 Scotch, and 11,000 Irish. The rest were foreigners.

Prices, Pauperism, and the Weather.—The price of wheat, 38*s.* 4*d.* per quarter, was less by 2*s.* than in the first three months of last year, and less by 8*s.* 3*d.* than in the same period of 1863. Both beef and mutton were dear. The average price of the best potatoes at the Waterside Market, Southwark, was 91*s.* per ton. In the March quarter of 1863 it was 125*s.*; in that of 1864 it was 62*s.* 6*d.*

The following are the returns of paupers in the last three winter quarters:

	In-door.	Out-door.
1863	143,661	948,212
'64	139,606	855,728
'65	142,329	813,371

The numbers show a decrease in out-door pauperism.

Mr. Glaisher writes that January began with cold frosty weather; a warm period set in on the 4th day and continued till the 16th, during which period, though the weather was mild, the sky was cloudy, and the wind blowing a gale. From the 17th January to the end of the quarter, with the exception of short intervals at the beginning and end of February, the weather was cold for the season, sometimes to an unpleasant degree. In a cold period in January the temperature of the air was as low as 20° at many places; in February from 13° to 20° in many places, and as low as 8° at Birmingham; and in March at the equinox it was as low as 23°. In January and February snowstorms were frequent, and extended all over England and Scotland. At the end of February the weather was extremely wild and stormy; and March was cold and ungenial throughout. The mean temperature of January at Greenwich was 36·3°; that of February and also that of March 36·6°, each being below the average of the corresponding periods in twenty-four years, and the mean temperature of March being as much as 5·4° below the average. Usually February is 2° and March 5° warmer than January; but this year the increase was not obtained. To find a March equally cold it is necessary to go back to 1845, 1837, and 1814, when the mean temperature was above 35° and below 36°. In 1785 it was 33·9°. Towards the end of last century that month was oftener remarkable for extreme coldness than it has been in later times.

* Return with which the Registrar-General has been favoured by the Emigration Commissioners: of 27,513 emigrants the origin was undistinguished in 751 cases, which have been distributed by calculation.

CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE, *in each of the Nine* QUARTERS *ended 31st March*, 1865.

1	2	3	4	5	6	7	8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Mean Temperature.
			Beef.	Mutton.		In-door.	Out-door.	
1863	£	*s.* *d.*	*d.* *d.* *d.*	*d.* *d.* *d.*	*s.* *s.* *s.*			°
31 Mar.	92 5/8	46 7	4—6 1/4 5 1/8	5—7 6	120—130 125	143,661	948,212	42·6
30 June	93 1/8	46 2	4 1/4—6 1/4 5 1/4	4 3/4—6 3/4 5 3/4	110—130 120	127,852	879,241	53·
30 Sept.	93	45 7	4 1/2—6 1/4 5 3/8	4 3/4—6 3/4 5 3/4	70—105 87	120,189	819,795	58·8
31 Dec.	92 7/8	40 6	4—6 1/4 5 1/8	5—7 6	60—80 70	130,072	804,941	46·8
1864								
31 Mar.	91	40 4	4 1/2—6 1/2 5 1/2	5 1/2—7 6 1/4	55—70 62	139,606	855,728	37·9
30 June	91 4/8	39 7	4 1/4—6 1/4 5 1/4	5 1/4—7 6 1/8	40—60 50	122,717	785,825	53·1
30 Sept.	89 1/8	42 3	4 1/2—6 1/2 5 1/2	5 1/2—7 6 1/4	80—120 100	115,698	739,341	59·4
31 Dec.	89 5/8	38 5	4 1/2—7 5 6/8	5 1/4—7 1/4 6 1/4	80—95 87	128,322	771,879	43·7
1865								
31 Mar.	89 3/8	38 4	4 1/2—7 5 3/4	5 1/4—7 1/4 6 1/4	85—97 91	142,329	813,371	36·5

DEATHS; AND THE STATE OF THE PUBLIC HEALTH.—In the last quarter the total number of deaths was 140,646 being less than in the same period of 1864, when it was barely 143,000, and much greater than in that of 1863, when it was 129,000. In London it was 21,018; in Cheshire and Lancashire, containing a population somewhat greater, 23,330. In all the eleven divisions of England the deaths were less numerous, as compared with those of the March quarter of last year, except the tenth namely, the northern counties (Durham, Northumberland, &c.), and the eleventh, Monmouthshire and Wales. In each of these two divisions there was an increase. The south-eastern counties also furnish an exception, but the numbers in the two quarters were almost equal.

The rate of mortality in England was 2·728 (viz., deaths to 100 persons living) against an average for the quarter of 2·522. Since the March quarter of 1855 the returns supply no example of as high a death-rate, with the exception of that of last year, when it rose in the three months to 2·773. The mortality was excessive both in the large town districts and in those districts which embrace the rural and small town population; 2·881 in the former, 2·514 in the latter; and it rose in both to nearly the same extent above the respective averages; the advantage, however, falling to the towns whose inhabitants are generally better

fed, and in this important matter better fortified against the inclemency of the sky.

The effect of the winter-like severity of March doubtless remains to be read in legible characters in the registers of the quarter now running; and the lateness of that unpropitious weather must be considered in any comparison between the last two winters. The mean temperature of the winter of 1864 was 37·9° at Greenwich, and was higher by 1·4° than that of last winter; but the weather was marked by more frequent and abrupt changes, and as the cold was more seasonably confined to the first two months, its effect would be apparent chiefly on the death-registers of that quarter. The deaths from bronchitis in London in the winter quarter of 1863-65 were successively 2,217, 4,023, and 3,217.

Average Annual Rate of Mortality to 1,000 *of the Population in the Eleven Divisions of England in the Ten Years* 1851-60; *in the Winter, Spring, Summer, and Autumn Quarters of* 1864; *and in the Winter Quarter of* 1865.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in					
	Ten Years, 1851-60.	1864.				1865.
		Winter Quarter.	Spring Quarter.	Summer Quarter.	Autumn Quarter.	Winter Quarter.
I. London	23·63	30·88	23·53	24·06	26·12	28·46
II. South-Eastern counties	19·55	24·18	19·41	18·66	19·37	24·25
III. South Midland ,,	20·44	26·53	21·61	20·43	22·66	25·39
IV. Eastern counties	20·58	24·51	21·25	19·05	20·86	24·47
V. South-Western counties	20·01	25·97	20·96	18·20	20·67	25·20
VI. West Midland ,,	22·35	27·57	22·32	21·55	23·77	27·15
VII. North Midland ,,	21·10	25·84	21·45	19·23	20·75	25·73
VIII. North-Western ,,	25·51	30·97	24·76	23·22	26·34	30·25
IX. Yorkshire	23·09	28·31	24·55	23·66	25·00	28·01
X. Northern counties	21·99	25·18	21·95	21·14	22·46	26·26
XI. Monmouthshire and Wales	21·28	26·28	22·97	20·17	23·59	29·51

The following statements exhibit the progress of scarlatina and typhus in London since 1860. Scarlatina discovers a uniform well-marked tendency to increase in the last six months, and attain its maximum in the December quarter, the earlier half of the following year witnessing a decrease. It was decidedly less fatal in 1864 than in 1863; while typhus, after declining in 1863, rose again in 1864. The last quarter of the year also favours the development of typhus, but by a law which is apparently less constant.

Deaths in London from Scarlatina.

Years.	March Quarter.	June Quarter.	September Quarter.	December Quarter.	Total.
1861	420	326	467	1,145	2,358
'62	774	677	841	1,165	3,457
'63	880	1,055	1,519	1,621	5,075
'64	749	593	805	1,095	3,242
'65	566	—	—	—	—

Deaths in London from Typhus (including Typhoid, Continued Fever, &c.).

Years.	March Quarter.	June Quarter.	September Quarter.	December Quarter.	Total.
1861	354	347	429	624	1,754
'62	991	1,015	833	796	3,635
'63	735	624	652	881	2,892
'64	862	783	980	1,064	3,689
'65	936	—	—	—	—

ANNUAL RATE *of* MORTALITY *per Cent. in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1865-63.

	Area in Statute Acres.	Population Enumerated. 1851.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per Cent. in each Quarter of the Years 1865.	Mean '55-64.	1864.	1863.
In 142 Districts, and 56 Sub-districts, comprising the *Chief Towns*.....	3,287,151	9,155,964	10,930,841	March	2·881	2·703	2·974	2·706
				June....	—	2·324	2·369	2·470
				Sept. ..	—	2·192	2·374	2·410
				Dec.	—	2·430	2·601	2·422
				Year	—	2·412	2·580	2·502
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,037,732	8,771,645	9,135,383	Year	—	1·987	2·116	2·057
				March	2·514	2·313	2·508	2·323
				June....	—	2·037	2·110	2·100
				Sept. ..	—	1·714	1·831	1·862
				Dec.....	—	1·885	2·015	1·944

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

Bronchitis and pneumonia, scarlatina, fever, and small-pox prevailed last winter both in town and country. Zymotic diseases ravaged South Wales, and raised the death-rate in the Welsh division to 2·951 per cent., which is higher than the rate of London or of any other division except that of the cotton districts. Out of 438 deaths in the sub-district of Cardiff, 55 were by small-pox, 31 by measles, 20 by scarlatina. Out of 128 deaths at Llantrisant 53 were from scarlatina. In the lower sub-district of Merthyr Tydfil out of 303 deaths, 32 were from scarlatina, 37 from measles, 11 from small-pox, and 20 from typhus. Aberdare returned 371 deaths, and of these 75 were from small-pox, and 35 from scarlatina. Of 203 deaths at Neath, small-pox caused 56, measles 31. There were 38 deaths from scarlatina at Llangafelach (Swansea), out of a total number of 143. The ill-health and the frequent deaths of the population of the principality appeal to the pity of every patriotic Welshman.

ENGLAND: — MARRIAGES *Registered in Quarters ended 31st December, 1864-62; and* BIRTHS *and* DEATHS *in Quarters ended 31st March, 1865-63.*

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	MARRIAGES in Quarters ended 31st December. '64.	'63.	'62.
ENGLD. & WALES.... *Totals*	37,324,883	No. 20,066,224	No. 53,069	No. 51,904	No. 48,624
I. London	77,997	2,803,989	8,693	7,856	7,811
II. South-Eastern	4,065,935	1,847,661	4,641	4,604	4,381
III. South Midland	3,201,290	1,295,497	3,245	3,215	3,099
IV. Eastern	3,214,099	1,142,580	3,146	3,088	3,025
V. South-Western	4,993,660	1,835,714	3,859	3,813	3,826
VI. West Midland	3,865,332	2,436,568	6,555	6,634	6,071
VII. North Midland	3,540,797	1,288,928	3,072	3,154	3,037
VIII. North-Western	2,000,227	2,935,540	7,247	7,635	6,369
IX. Yorkshire	3,654,636	2,015,541	6,025	5,659	5,143
X. Northern	3,492,322	1,151,372	3,175	2,917	2,762
XI. Monmthsh. & Wales	5,218,588	1,312,834	3,411	3,329	3,100

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 31st March. '65.	'64.	'63.	DEATHS in Quarters ended 31st March. '65.	'64.	'63.
ENGLD. & WALES.... *Totals*	No. 194,287	No. 192,926	No. 186,341	No. 140,646	No. 143,030	No. 128,096
I. London	28,059	26,651	26,385	21,018	22,733	18,703
II. South-Eastern	16,912	16,659	16,264	11,600	11,581	10,114
III. South Midland	11,900	11,994	11,548	8,265	8,714	7,474
IV. Eastern	10,252	10,478	10,012	6,960	7,051	6,857
V. South-Western	15,872	16,020	16,025	11,483	11,978	11,136
VI. West Midland	24,103	24,859	23,740	17,156	17,435	16,481
VII. North Midland	11,855	11,838	11,684	8,365	8,468	7,346
VIII. North-Western	29,982	30,011	28,722	23,330	23,824	20,992
IX. Yorkshire	20,748	20,503	19,091	14,571	14,755	13,533
X. Northern	12,449	12,090	11,497	7,966	7,613	7,353
XI. Monmthsh. & Wales	12,155	11,823	11,373	9,932	8,878	8,107

REMARKS ON THE WEATHER

DURING THE QUARTER ENDING 31ST MARCH, 1865.

By JAMES GLAISHER, ESQ., F.R.S., *&c., Sec. of the British Meteorological Society.*

The month of January opened with cold frosty weather; on the fourth day a warm period set in and continued to the 16th; the average daily excess of temperature being $5\frac{1}{2}^{\circ}$. During this period, although the weather was mild for the season, the sky was mostly cloudy, and the wind was frequently blowing a gale; there were pressures of 21 lbs. on the square foot on the 6th; of 15 lbs. on the 12th; of $17\frac{1}{2}$ lbs. on the 13th; and of no less than 29 lbs. on the 14th.

From 17th January to the end of the quarter, with the exception of a few days at the beginning and end of February, the weather was cold for the season, at times unpleasantly so, particularly after 20th of January, about the middle of February, and towards the end of March. At these times the temperature in January was as low as 20° at many places; in February from 13° to 20°, and as low as 8° at Birmingham; and in March at the time of the equinox it was as low as 23°. The deficiency of temperature on some days was as large as 9° to 14°, and for the 74 days ending 31st March, was the very large average amount for so long a period as 3°·8 daily.

In January and February snow-storms were frequent, producing a good supply of water, and thus relieved the farmers in many parts of England of the necessity of fetching water from a distance, which they had been compelled to do for months previously. The snow-falls extended all over England and Scotland. On several days at the end of February the weather was extremely wild and stormy. Snow to small amounts continued to fall, chiefly crystalline, in March, till after the equinox, and the month was cold and ungenial throughout, its mean temperature being the same as in February, and only $\frac{1}{4}^{\circ}$ above that in January.

The mean temperature of January was 36°·3, being the 1°·9 *below* the average of the preceding 24 years, and 0°·2 less than that in 1864.

The mean temperature of February was 36°·6, being 2°·1 *below* the average of the preceding 24 years, but 0°·6 above that in 1864.

The mean temperature of March was 36°·6, being 5°·4 *below* the average of the preceding 24 years, and 4°·7 below that in 1864.

The temperature in March is therefore very remarkable, as we have to go back 20 years to find one so cold, viz., in the year 1845, when it was 35°·2; in 1837 it was 35°·8. The next very cold March was in 1814, when it was 35°·1; and for 25 years before that there was no instance of such low temperature; in 1789 it was 34°·4; in 1786 it was 34°·2; in 1785, 33°·9; in 1784, 36°·2; and in 1771 it was 34°·7. From this it will be seen that the month of March was much more frequently cold towards the end of last century than lately.

Usually February is 2° warmer, and March 5° warmer than January. This year the mean temperature of each month has been very nearly the same; the usual increase has not taken place.

The mean high day temperature was below their averages to the amounts of 2°·3, 2°·7, and 6°·2, respectively in these three months.

The mean low night temperature was below its average to the amounts of 1°·7, 1°·3, and 4°·3 respectively.

Therefore both the days and nights were very cold in these three months, particularly in March.

The mean temperature of the dew point was 2°·1, 2°·6, and 1°·9 below their respective averages in the preceding 24 years.

The degree of humidity was a little above its average in January, below in February, and the same as the average in March.

The pressure of the atmosphere was a little more than $\frac{1}{3}$ inch in defect in January, and slightly in defect in February and March, it being very nearly of the same values in the last two months.

The range of readings of the barometer in January and February was about $1\frac{1}{2}$ inch at southern, gradually increasing to nearly 2 inches at extreme northern stations; and in March was about 1 inch at all stations.

The fall of rain was in excess in January and February, and in defect in March.

The mean temperature of the air at Greenwich in the three months ending February, constituting the three winter months, was 37°·1, being 0°·7 below the average of the preceding 94 years.

1865. Months.	Temperature of Air. Mean.	Air. Diff. from Average of 94 Years.	Air. Diff. from Average of 24 Years.	Evaporation. Mean.	Evaporation. Diff. from Average of 24 Years.	Dew Point. Mean.	Dew Point. Diff. from Average of 24 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 24 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 24 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour in a Cubic Foot of Air. Diff. from Average of 24 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Gr.	Gr.
Jan.	36·3	+0·1	−1·9	35·0	−2·0	33·0	−2·1	9·1	−0·6	39·0	·188	−·015	2·2	−0·2
Feb.	36·6	−1·7	−2·1	34·7	−2·4	32·0	−2·7	10·0	−1·4	37·0	·181	−·022	2·1	−0·3
March ...	36·6	−4·4	−5·4	34·5	−5·1	30·5	−6·2	12·9	−1·8	39·9	·170	−·049	2·0	−0·5
Mean.....	36·5	−2·0	−3·1	34·7	−3·2	31·8	−3·7	10·7	−1·3	38·6	·179	−·027	2·1	−0·3

1865. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 24 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 24 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 24 Years.	Rain. Amnt.	Rain. Diff. from Average of 48 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was At or below 30°.	Between 30° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night
			In.	In.	Gr.	Gr.	In.	In.	Miles.				°	°
Jan.	89	+ 1	29·405	−·367	550	− 4	3·3	+1·6	271	14	16	1	13·1	43 0
Feb.	83	− 2	29·722	−·080	555	+ 1	1·9	+0·3	311	14	14	0	15·3	39·7
March ...	82	0	29·720	−·038	555	+ 5	0·9	−0·7	270	22	9	0	20·5	39·2
Mean.....	85	0	29·616	−·162	553	+ 1	Sum 6·1	Sum +1·2	Mean 284	Sum 50	Sum 39	Sum 1	Lowest 13·1	Highst 43·0

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND:—*Meteorological Table, Quarter ended 31st March, 1865.*

1 Names of Stations.	2 Mean Pressure of Dry Air reduced to the Level of the Sea.	3 Highest Reading of the Thermometer.	4 Lowest Reading of the Thermometer.	5 Range of Temperature in the Quarter.	6 Mean Monthly Range of Temperature.	7 Mean Daily Range of Temperature.	8 *Mean Temperature of the Air.*	9 Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·601	53·0	27·0	26·0	22·7	7·8	40·5	88
Ventnor	29·617	59·0	25·0	27·0	25·0	8·9	39·7	73
Barnstaple	29·581	62·5	24·8	38·5	32·2	10·7	39·8	88
Royal Observatory	29·615	58·7	15·5	43·2	34·3	10·7	36·5	85
Royston	29·623	52·0	12·9	39·1	34·7	11·0	35·1	89
Lampeter	29·615	56·6	5·0	51·6	37·1	11·9	36·9	88
Diss (Norfolk)	29·630	54·5	12·0	42·5	35·5	12·7	35·6	90
Belvoir Castle	29·491	56·0	10·0	46·0	38·3	13·2	34·5	93
Liverpool	29·618	51·3	28·4	22·9	23·4	7·0	37·7	84
Wakefield	29·562	56·3	12·5	43·8	35·8	11·7	36·4	92
Stonyhurst	29·535	52·4	16·8	35·6	28·8	10·0	35·4	85
North Shields	29·593	54·0	17·0	37·0	30·2	8·5	35·5	88

10 Names of Stations.	11 Wind. Mean estimated Strength.	12 Wind. Relative Proportion of N.	13 E.	14 S.	15 W.	16 Mean Amount of Cloud.	17 Rain. Number of Days on which it fell.	18 Amount collected.
								in.
Guernsey	1·6	8	6	7	10	6·3	55	14·8
Ventnor	—	8	9	3	11	—	51	9·5
Barnstaple	—	9	8	6	8	4·6	47	11·8
Royal Observatory	0·4	9	5	7	10	7·6	35	6·1
Royston	—	8	5	7	11	7·3	66	7·7
Lampeter	0·9	7	7	7	10	6·9	57	10·6
Diss (Norfolk)	1·2	4	4	8	11	7·1	42	7·5
Belvoir Castle	1·7	6	3	12	10	6·7	44	6·0
Liverpool	1·4	6	7	9	9	6·9	40	5·6
Wakefield	1·8	6	5	7	13	7·1	46	3·4
Stonyhurst	0·7	10	7	4	10	7·5	57	10·0
North Shields	1·9	8	6	7	10	6·3	50	4·7

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 31ST MARCH, 1865.

For the purposes of Registration, Scotland is divided into 1,011 Districts, and this Return comprises the number of BIRTHS, DEATHS, and MARRIAGES entered on the registers of these districts during the quarter ending 31st March, 1865. During that period there were registered 28,608 births, 20,786 deaths, and 5,407 marriages. From this it appears that births, deaths, and marriages have all been above the average of the corresponding quarter of the nine previous years.

BIRTHS.—28,608 births were registered in Scotland during the quarter ending 31st March, 1865, being in the annual proportion of 365 births in every 10,000 persons of the estimated population. This is a higher birth-rate than Scotland has exhibited during the corresponding quarter of the nine previous years, which only gave a mean annual proportion of 346 births in every 10,000 persons of the population.

The town and rural districts showed the usual difference in the proportion of births. Thus the 126 town districts (which embrace all the towns with populations of 2,000 and upwards), registered 16,810 births, while the 885 rural districts (embracing the remainder of the population of Scotland) registered 11,798 births; thus indicating an annual proportion of 402 births in every 10,000 persons in the town districts, but only 322 births in a like population in the rural districts.

TABLE I.—*Rates per Cent. of the Illegitimate Births in the Divisions and Counties of Scotland during the Quarter ending 31st March*, 1865.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	10·3						
Northern	5·0	Shetland	2·7	Forfar	12·5	Lanark	8·4
		Orkney	6·4	Perth	10·3	Linlithgow .	8·4
North-Western	7·1	Caithness	7·2	Fife	9·7	Edinburgh .	9·7
		Sutherland....	1·4	Kinross	9·6	Haddington	10·9
North-Eastern	17·4	Ross and Cromarty	5·7	Clackmannan	10·5	Berwick	11·4
East Midland ..	11·1					Peebles.....	8·5
West Midland.	7·7	Inverness	8·6	Stirling	8·6	Selkirk	14·5
		Nairn	16·1	Dumbarton ..	6·8	Roxburgh ..	12·0
South-Western	8·5	Elgin	19·2	Argyll	8·0	Dumfries	15·8
South-Eastern.	9·9	Banff	14·2	Bute	2·7	Kirkcudbright ..	16·4
		Aberdeen	17·9	Renfrew.....	7·9		
Southern	15·5	Kincardine....	17·3	Ayr.....	9·6	Wigtown	18·4

Of the 28,608 births, 25,640 were legitimate, and 2,968 illegitimate; being in the proportion of one illegitimate in every 9·6 births; or 10·3 per cent. of the births as illegitimate. As usual, the proportion of illegitimate births in the town districts was lower than that in the rural districts; for while only 9·8 per cent. of the births were illegitimate in the towns, 11·1 per cent. were illegitimate in the rural districts. Table I. exhibits the proportion of illegitimate

births in the several divisions and counties of Scotland, and generally accords with previous returns, the north-eastern and southern divisions of Scotland exhibiting a very much higher proportion of illegitimate births than the other divisions. Thus while only 5 per cent. of the births were illegitimate in the northern, 7·1 in the north-western, and 7·7 per cent. in the west midland division, 15·5 per cent. of the births were illegitimate in the southern, and 17·4 per cent. in the north-eastern divisions.

Of the children born during the quarter, 14,629 were males, and 13,979 females; being in the proportion of 104·6 males for every 100 females at birth.

Deaths.—20,786 deaths were registered in Scotland during the first quarter of the year 1865, being in the annual proportion of 265 deaths in every 10,000 persons of the estimated population. This is a death-rate considerably higher than the mean of the corresponding quarter of the ten previous years, which was at the rate of 244 deaths in every 10,000 persons; but it was lower than that of the first quarter of last year, when the proportion was 289 deaths in every 10,000 persons.

The deaths in the town districts, as usual, greatly exceeded those in the rural districts. Thus, in the 126 town districts, 13,357 deaths were registered; while in the 885 rural districts, only 7,429 deaths occurred; indicating an annual proportion of 319 deaths in every 10,000 persons in the town districts, but only 203 deaths in a like number of persons in the rural districts.

Table II.—*Number of Births, Deaths, and Marriages in Scotland, and in the Town and Country Districts during the Quarter ending 31st March, 1865, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated, 1865.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,136,057	28,608	3·65	27	2,968	10·3	9·6
126 town districts	1,603,875	1,672,210	16,810	4·01	25	1,655	9·8	10·1
885 rural „	1,458,419	1,463,847	11,798	3·22	31	1,313	11·1	8·9

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated, 1865.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,136,057	20,786	2·65	38	5,407	0·69	145
126 town districts	1,603,875	1,672,210	13,357	3·19	31	3,473	0·83	120
885 rural „	1,458,419	1,463,847	7,429	2·03	49	1,934	0·52	189

Of the deaths, 6,910 were registered during January, 7,012 during February, and 6,864 during March; so that the daily deaths in Scotland amounted to 223 during January, to 250 during February, and 221 during March.

Increase of the Population.—As the births numbered 28,608, and the

deaths 20,786, the natural increase of the population during the quarter, through the excess of births over deaths, amounted to 7,822 persons. From a return furnished to the Registrar-General by the Emigration Commissioners, it appears that 27,513 persons emigrated from the ports of Great Britain and Ireland, of which number 1,736 were ascertained to be of Scottish origin. If 48 be added to that number as the proportion of persons whose origin was not ascertained, the total number of Scottish emigrants during the quarter would amount to 1,784; and that deducted from the excess of births over deaths, would leave 6,038 as the increase of the population during the quarter. This calculation, however, makes no allowance for the large emigration to England, nor for the drafts to the army, navy, and merchant shipping.

TABLE III.—*Number of Births, Deaths, and Marriages in Scotland, and their each Quarter of the Years*

	1856.		1857.		1858.		1859.		1860.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	25,129	3·37	26,010	3·47	26,022	3·45	25,988	3·42	27,118	3·55
Deaths.....	16,018	2·15	16,684	2·22	17,321	2·29	17,102	2·25	20,223	2·65
Marriages ..	4,499	0·60	4,988	0·66	4,486	0·59	4,890	0·64	4,802	0·63
Mean Temperature	37°·8		38°·1		38°·2		41°·0		36°·0	
2nd Quarter–										
Births	26,848	3·60	27,381	3·65	27,846	3·69	28,510	3·76	28,292	3·71
Deaths.....	14,684	1·97	15,526	2·07	15,657	2·07	15,653	2·06	18,182	2·38
Marriages ..	5,241	0·70	5,435	0·72	4,927	0·65	5,150	0·67	5,329	0·69
Mean Temperature	48°·1		49°·9		50°·7		50°·1		48°·2	
3rd Quarter—										
Births	24,636	3·30	24,856	3·31	24,905	3·30	25,956	3·42	24,914	3·26
Deaths.....	12,861	1·72	14,713	1·96	14,012	1·85	13,340	1·76	13,875	1·82
Marriages ..	4,549	0·61	4,470	0·59	4,081	0·54	4,626	0·61	4,514	0·59
Mean Temperature	54°·8		58°·0		56°·1		56°.4		53°·9	
4th Quarter—										
Births	25,208	3·38	25,168	3·35	25,245	3·34	26,089	3·44	25,305	3·31
Deaths.....	14,966	2·00	14.983	2·00	16,549	2·19	15,619	2·06	15,890	2·08
Marriages ..	6,451	0·86	6,476	0·86	6,161	0·81	6,535	0·86	6,580	0·86
Mean Temperature	42°·1		46°·1		41°·4		39°·7		39°·7	
Year—										
Population.	2,979,855		2,997,210		3,014,565		3,031,921		3,049,277	
Births	101,821	3·41	103,415	3·45	104,018	3·45	106,543	3·51	105,629	3·46
Deaths.....	58,529	1·96	61,906	2·06	63,539	2·10	61,714	2·03	68,170	2·23
Marriages ..	20,740	0·69	21,369	0·71	19,655	0·65	21,201	0·69	21,225	0·69

Marriages.—5,407 marriages were registered in Scotland during the first quarter of 1865, being in the annual proportion of 69 marriages in every 10,000 persons of the estimated population. This is a proportion greatly above the average marriage-rate of the quarter during the nine previous years, which was only at the rate of 63 marriages in every 10,000 persons.

This high marriage-rate was almost entirely confined to the town districts, that of the rural districts remaininig at its normal amount. Thus in the 126 town districts 3,473 marriages were registered, but in the 885 rural districts, only 1,934 marriages; thus indicating a marriage-rate in the town districts equal to 83 marriages in every 10,000 persons, but only 52 marriages in the rural districts in an equal population.

Proportion to the Population, Estimated to the Middle of each Year, during 1856 *to* 1865 *inclusive.*

1861.		1862.		1863.		1864.		1865.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
25,425	3·31	27,107	3·51	26,729	3·44	28,177	3·61	28,608	3·65	*1st Quarter*— Births
17,929	2·33	19,412	2·51	19,227	2·47	22,576	2·89	20,786	2·65	Deaths
4,619	0·60	4,750	0·61	5,090	0·65	5,333	0·68	54,407	0·69	Marriages
38°·9		38°·8		40°·9		35°·7		35°·3		Mean Temperature
29,200	3·80	28,745	3·73	29,651	3·82	29,992	3·84	—	—	*2nd Quarter*— Births
15,934	2·07	17,382	2·25	17,947	2·31	18,445	2·36	—	—	Deaths
5,310	0·69	5,172	0·67	5,557	0·71	5,710	0·73	—	—	Marriages
50°·6		49°·4		49°·0		49°·9		—		Mean Temperature
26,146	3·41	25,798	3·34	26,362	3·40	27,063	3·47	—	—	*3rd Quarter*— Births
13,402	1·74	14,227	1·84	16,249	2·09	16,131	2·06	—	—	Deaths
4,463	0·58	4,558	0·59	4,863	0·62	4,993	0·64	—	—	Marriages
56°·0		54°·4		53°·9		54°·5		—		Mean Temperature
26,265	3·42	25,484	3·30	26,583	3·42	27,213	3·49	—	—	*4th Quarter*— Births
15,022	1·95	16,145	2·09	17,998	2·32	17,151	2·19	—	—	Deaths
6,436	0·84	6,066	0·78	6,577	0·84	6,639	0·85	—	—	Marriages
42°·0		42°·0		43°·6		42°·0		—		Mean Temperature
3,066,633		3,083,989		3,101,345		3,118,701		3,136,057		*Year*— Population
107,036	3·49	107,138	3·47	109,325	3·52	112,445	3·65	—	—	Births
62,287	2·03	67,159	2·17	71,421	2·30	74,303	2·35	—	—	Deaths
20,828	0·67	20,544	0·66	22,087	0·71	22,675	0·72	—	—	Marriages

SCOTLAND:—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended 31st March*, 1865.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1861. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND.....*Totals*	19,639,377	3,062,294	5,407	28,608	20,786
I. Northern	2,261,622	130,422	160	717	685
II. North-Western.....	4,739,876	167,329	288	1,120	811
III. North-Eastern	2,429,594	366,783	495	3,166	1,836
IV. East Midland	2,790,492	523,822	948	4,583	3,403
V. West Midland	2,693,176	242,507	357	2,002	1,401
VI. South-Western	1,462,397	1,008,253	2,164	11,498	8,681
VII. South-Eastern	1,192,524	408,962	747	3,762	2,746
VIII. Southern	2,069,696	214,216	248	1,760	1,223

No. III.—IRELAND.

No. IV.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended 31st December*, 1864; *and* BIRTHS *and* DEATHS, *in the Quarter ended 31st March*, 1865.

COUNTRIES.	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
England and Wales	37,324,883	20,066,224	53,069	194,287	140,646
Scotland	19,639,377	3,062,294	6,639	28,608	20,785
Ireland	20,322,641	5,798,967	*	*	*
GREAT BRITAIN AND IRELAND	77,286,901	28,927,485			

* At the time of going to press the return of the Registrar-General for Ireland had not been received.

Trade of United Kingdom, 1864-63-62.—*Distribution of* **Exports** *from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	Whole Years. 1864. Imports from	1864. *Exports to*	1863. Imports from	1863. *Exports to*	1862. Imports from	1862. *Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	22,354,	5,649,	19,312,	4,871,	21,121,	4,124,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	32,416,	24,485,	27,426,	21,702,	27,921,	20,536,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	34,326,	14,927,	31,837,	15,972,	28,096,	14,912,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	4,120,	8,207,	4,568,	8,303,	5,045,	6,879,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	25,908,	13,538,	22,553,	11,298,	17,251,	6,661,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	415,	176,	542,	191,	489,	204,
Western Africa	1,064,	571,	1,412,	655,	1,720,	939,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	73,	115,	37,	75,	—	74,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	1,070,	1,577,	1,598,	1,228,	1,041,	1,248,
South Sea Islands	18,	185,	20,	141,	—	—
China, including Hong Kong	17,098,	5,334,	15,479,	4,032,	12,749,	3,190,
United States of America	17,924,	16,704,	19,571,	15,352,	27,693,	14,399,
Mexico and Central America	3,557,	2,060,	2,780,	1,819,	1,112,	925,
Foreign West Indies and Hayti	6,767,	4,369,	4,857,	3,487,	4,591,	3,148,
South America (Northern), New Granada, Venezuela, and Ecuador	1,892,	2,518,	867,	1,969,	916,	1,008,
,, (Pacific), Peru, Bolivia, Chili, and Patagonia	5,898,	3,030,	6,113,	2,461,	5,602,	1,707,
,, (Atlantic) Brazil, Uruguay, and Buenos Ayres	9,302,	9,010,	6,954,	5,831,	6,540,	5,073,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	95,	15,	89,	12,	123,	10,
Total.—Foreign Countries	184,297,	112,470,	166,015,	99,399,	162,010,	85,037,
II.—British Possessions:						
British India, Ceylon, and Singapore	57,520,	21,909,	53,966,	22,558,	39,014,	16,282,
Austral. Cols.—New South Wales and Victoria	6,854,	8,060,	4,648,	8,756,	4,950,	9,218,
,, ,, So. Aus., W. Aus., Tasm., and N. Zea.	3,185,	3,799,	2,513,	3,749,	2,160,	2,712,
British North America	6,851,	5,611,	8,166,	4,819,	8,499,	3,993,
,, W. Indies with Btsh. Guiana & Honduras	11,450,	4,325,	8,910,	3,928,	6,584,	3,187,
Cape and Natal	1,976,	2,273,	1,920,	1,524,	1,517,	1,922,
Brt. W. Co. of Af., Ascension and St. Helena	306,	314,	208,	369,	237,	411,
Mauritius	1,589,	659,	1,986,	522,	968,	521,
Channel Islands	836,	1,016,	648,	866,	653,	854,
Total.—British Possessions	90,567,	47,966,	82,965,	47,091,	64,582,	39,100,
General Total.....£	274,864,	160,436,	248,980,	146,490,	226,592,	124,137,

IMPORTS.—(United Kingdom.)—Whole Years, 1864-63-62-61-60.—*Compute Real Value (Ex-duty), at Port of Entry (and therefore including Freight an Importer's Profit), of Articles of Foreign and Colonial Merchandize Importe into the United Kingdom.*

(Whole Years.) (000's omitted.) Foreign Articles Imported.		1864.	1863.	1862.	1861.	1860.
		£	£	£	£	£
Raw Matls.—*Textile.*	Cotton Wool ...	78,204,	56,278,	31,093,	38,653,	35,757,
	Wool (Sheep's)..	15,998,	12,290,	12,109,	9,719,	11,031,
	Silk	12,940,	15,248,	15,897,	7,907,	10,324,
	Flax	5,323,	4,271,	5,206,	3,423,	3,837,
	Hemp	3,976,	3,451,	2,645,	1,894,	1,865,
	Indigo	2,248,	2,398,	2,446,	2,977,	2,529,
		118,689,	93,936,	69,396,	64,573,	65,343,
,, ,, *Various.*	Hides	3,132,	3,217,	3,188,	2,892,	3,296,
	Oils	3,390,	4,075,	3,951,	3,576,	3,923,
	Metals	4,504,	4,087,	4,604,	3,752,	4,228,
	Tallow	2,077,	2,439,	2,508,	3,312,	4,014,
	Timber.....	10,946,	10,754,	9,293,	9,931,	9,206.
		24,049,	24,572,	23,544,	23,463,	24,667,
,, ,, *Agrcltl.*	Guano	1,463,	2,659,	1,635,	2,022,	1,563,
	Seeds	3,947,	3,372,	3,211,	3,108,	3,392
		5,410,	6,031,	4,846,	5,130,	4,955,
Tropical, &c., Produce.	Tea	9,439,	10,666,	9,176,	6,851,	6,944,
	Coffee	3,616,	4,155,	3,303,	2,629,	2,543,
	Sugar & Molasses	16,458,	12,367,	12,019,	13,252,	12,811,
	Tobacco	3,361,	3,017,	2,351,	2,195,	1,778,
	Rice	1,809,	1,866,	2,400,	2,127,	1,023,
	Fruits	1,172,	1,562,	1,228,	1,470,	1,254,
	Wine	5,003,	4,497,	3,649,	3,863,	4,202,
	Spirits	1,990,	1,706,	1,692,	1,734,	1,919,
		42,848,	39,836,	35,818,	34,121,	32,474,
Food	Grain and Meal..	19,709,	25,886,	37,748,	34,750,	31,432,
	Provisions	9,740,	8,789,	8,564,	7,780,	6,546,
		29,449,	34,675,	46,312,	42,530,	37,978,
Remainder of Enumerated Articles		5,612,	4,776,	4,213,	3,869,	3,714,
Total Enumerated Imports....		226,057,	203,826,	184,129,	173,687,	169,131,
Add for Unenumerated Imports (say)		56,511,	45,154,	42,473,	43,422,	42,283,
Total Imports.....		282,568,	248,980,	226,592,	217,109,	211,414,

IMPORTS.—(United Kingdom.)—First Two Months (*January—February*), 1865-64-63-62-61.—*Computed Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Two Months.) [000's omitted.] Foreign Articles Imported.		1865.	1864.	1863.	1862.	1861.
		£	£	£	£	£
Raw Matls.—*Textile.*	Cotton Wool	7,057,	6,060,	3,532,	1,206,	3,979,
	Wool (Sheep's)..	728,	534,	578,	510,	392,
	Silk	2,283,	1,635,	2,190,	2,034,	1,181,
	Flax	324,	810,	387,	366,	198,
	Hemp	139,	209,	110,	60,	54,
	Indigo	211,	94,	223,	179,	66,
		10,742,	9,342,	7,020,	4,355,	5,870,
,, ,, *Various.*	Hides	198,	169,	162,	182,	124,
	Oils	341,	293,	378,	339,	170,
	Metals	377,	492,	411,	525,	260,
	Tallow	155,	176,	77,	145,	130,
	Timber.....	703,	973,	556,	498,	526,
		1,774,	2,103,	1,584,	1,689,	1,210,
,, ,, *Agricltl.*	Guano	218,	109,	141,	54,	151,
	Seeds	458,	553,	233,	242,	288,
		676,	662,	374,	296,	379,
Tropical, &c., Produce.	Tea	681,	1,201,	2,120,	1,639,	1,110,
	Coffee	233,	271,	350,	284,	172,
	Sugar & Molasses	993,	935,	1,357,	1,153,	1,304,
	Tobacco	282,	263,	314,	154,	179,
	Rice.....	56,	85,	100,	46,	128,
	Fruits	81,	62,	40,	82,	173,
	Wines	465,	708,	595,	448,	544,
	Spirits	203,	331,	345,	241,	186,
		2,994,	3,856,	5,221,	4,047,	3,796,
Food	Grain and Meal..	1,509,	3,263,	3,957,	5,274,	6,172,
	Provisions	1,016,	937,	565,	658,	508,
		2,525,	4,200,	4,522,	5,932,	6,680,
Remainder of Enumerated Articles		579,	572,	512,	408,	311,
Total Enumerated Imports....		19,290,	20,735,	19,233,	16,727,	18,246,
Add for Unenumerated Imports (say)		4,822,	5,183,	4,808,	4,182,	4,561,
Total Imports.....		24,112,	25,918,	24,041,	20,909,	22,807,

EXPORTS.—(United Kingdom.)—First Three Months (*January—March*) 1865-64-63-62-61.—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(First Three Months.) [000's omitted.] British Produce, &c., Exported.		1865.	1864.	1863.	1862.	1861.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	10,947,	10,465,	6,312,	7,530,	9,134,
	,, Yarn.....	1,708,	2,103,	1,143,	1,389,	1,908,
	Woollen Manufactures	4,047,	4,718,	3,209,	2,985,	2,876,
	,, Yarn.....	935,	1,073,	984,	669,	641,
	Silk Manufactures ...	296,	387,	443,	473,	532,
	,, Yarn.....	60,	55,	84,	78,	55,
	Linen Manufactures....	2,084,	1,998,	1,455,	1,088,	1,084,
	,, Yarn.....	515,	653,	493,	403,	327,
		20,592,	21,452,	14,123,	14,615,	16,557,
,, *Sewed.*	Apparel	536,	554,	526,	422,	390,
	Haberdy. and Mllnry.	1,002,	1,252,	860,	673,	902,
		1,538,	1,806,	1,386,	1,095,	1,292,
Metals	Hardware.....	892,	842,	680,	566,	732,
	Machinery	1,296,	924,	838,	718,	750,
	Iron	2,399,	2,982,	2,536,	2,049,	2,058,
	Copper and Brass.....	913,	697,	784,	596,	474,
	Lead and Tin	576,	709,	610,	586,	350,
	Coals and Culm	905,	903,	765,	782,	658,
		6,981,	7,057,	6,178,	5,297,	5,022,
Ceramic Manufcts.	Earthenware and Glass	524,	490,	435,	357,	385,
Indigenous Mnfrs.	Beer and Ale	595,	474,	456,	402,	348,
	Butter	56,	69,	108,	54,	134,
	Cheese	22,	41,	31,	25,	27,
	Candles	28,	32,	54,	47,	69,
	Salt	33,	48,	52,	58,	78,
	Spirits	69,	161,	114,	58,	79,
	Soda.....	228,	209,	198,	186,	117,
		1,031,	1,034,	1,013,	830,	852,
Various Manufcts.	Books, Printed.....	98,	100,	89,	83,	100,
	Furniture.....	91,	47,	64,	45,	35,
	Leather Manufactures	614,	525,	456,	585,	402,
	Soap.....	44,	53,	59,	53,	46,
	Plate and Watches	97,	98,	114,	94,	102,
	Stationery.....	95,	75,	59,	57,	143,
		1,039,	898,	842,	917,	828,
Remainder of Enumerated Articles		2,200,	2,212,	1,771,	1,663,	710,
Unenumerated Articles		1,730,	1,718,	1,813,	1,649,	2,023,
Total Exports		35,635,	36,667,	27,561,	26,423,	27,669,

SHIPPING.—Foreign Trade.—(United Kingdom.)—First Three Months (*January—March*), 1865-64-63-62.—*Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.*

(First Three Months.)	1865.			1864.		1863.		1862.	
Entered:—	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
Vessels belonging to—	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	63	27,	429	75	31,	43	16,	55	20,
Sweden	56	10,	179	135	24,	112	22,	65	16,
Norway	491	106,	216	515	113,	427	100,	314	62,
Denmark	227	24,	106	617	61,	479	47,	309	32,
Prussia and Ger. Sts.	358	102,	285	452	121,	496	140,	361	101,
Holland and Belgium	367	50,	136	461	56,	406	53,	356	47,
France	640	57,	89	700	57,	760	64,	396	35,
Spain and Portugal	83	27,	325	78	22,	87	26,	77	24,
Italy & other Eupn. Sts.	153	47,	307	112	36,	135	40,	81	27,
United States	60	67,	1,117	111	124,	209	217,	248	221,
All other States	10	4,	400	2	1,	5	2,	2	1,
United Kingdm. & Depds.	2,508 4,398	521, 1,401,	208 319	3,258 4,522	646, 1,417,	3,159 4,544	728, 1,392,	2,264, 3,844	586, 1,181,
Totals Entered	6,906	1,922,	278	7,780	2,063,	7,703	2,120,	6,108	1,767,
Cleared:—									
Russia	112	49,	438	112	46,	82	31,	91	31,
Sweden	73	19,	260	119	25,	86	23,	100	25,
Norway	266	67,	252	380	94,	236	55,	227	51,
Denmark	347	41,	118	553	58,	432	46,	414	44,
Prussia and Ger. Sts.	576	148,	257	425	123,	687	163,	739	153,
Holland and Belgium	385	56,	145	351	53,	369	52,	438	68,
France	894	98,	110	1,118	115,	1,010	101,	1,223	127,
Spain and Portugal	82	28,	341	74	23,	77	26,	76	24,
Italy & other Eupn. Sts.	253	82,	324	224	72,	190	60,	97	32,
United States	67	61,	910	97	102,	177	178,	260	219,
All other States	9	3,	333	3	1,	6	2,	12	6,
United Kingdm. & Depds.	3,064 5,688	652, 1,879,	213 330	3,456 5,971	712, 1,882,	3,352 5,966	737, 1,723,	3,687 5,792	780, 1,640,
Totals Cleared	8,752	2,531,	281	9,427	2,594,	9,318	2,460,	9,479	2,420,

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* First Three Months (*January—March*), 1865-64-63.

[000's omitted.]

(First Three Months.)	1865.		1864.		1863.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	533,	—	669,	—	1,001,	—
So. Amca. and W. Indies	772,	1,375,	1,533,	2,195,	1,267,	2,019,
United States and Cal.	988,	21,	1,632,	23,	2,496,	320,
	2,293,	1,396,	3,834,	2,218,	4,764,	2,339,
France	17,	307,	57,	464,	7,	302,
Hanse Towns, Holl. & Belg.	4,	29,	80,	891,	181,	485,
Prtgl., Spain, and Gbrltr.	249,	16,	14,	31,	3,	21,
Mlta., Trky., and Egypt	44,	—	6,	—	114,	1,
China	—	—	—	—	—	—
West Coast of Africa	28,	6,	29,	—	28,	1,
All other Countries	25,	16,	89,	35,	7,	2,
Totals Imported	3,651,	1,770,	4,109,	3,639,	5,104,	3,151,
Exported to:—						
France	881,	184,	1,726,	658,	1,294,	245,
Hanse Towns, Holl. & Belg.	2,	348,	36,	236,	944,	148,
Prtgl., Spain, and Gbrltr.	363,	—	489,	6,	1,221,	—
	1,246,	532,	2,251,	900,	3,459,	393,
Ind. and China (viâ Egypt)	115,	934,	835,	2,536,	610	2,662,
Danish West Indies	—	—	—	—	—	—
United States	—	—	6,	5,	2,	—
South Africa	—	—	—	—	34,	11,
Mauritius	—	—	—	—	—	—
Brazil	3,	26,	536,	36,	350,	25,
All other Countries	106,	22,	184,	34,	152,	25,
Totals Exported	1,470,	1,514,	3,812,	3,511,	4,607,	3,116,
Excess of *Imports*	2,181,	256,	297,	128,	497,	35,
,, Exports	—	—	—	—	—	—

REVENUE.—(United Kingdom.)—31st March, 1865-64-63-62.

Net Produce in Years *and* Quarters *ended* 31st March, 1865-64-63-62.

[000's omitted.]

QUARTERS, ended 31st March.	1865.	1864.	1865.		Corresponding Quarters.	
			Less.	More.	1863.	1862.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	5,570,	5,533,	—	37,	5,722,	5,724,
Excise	5,342,	5,127,	—	,215,	4,665,	5,044,
Stamps	2,501,	2,439,	—	62,	2,374,	2,294,
Taxes	398,	367,	—	31,	357,	355,
Post Office	1,005,	965,	—	40,	955,	905,
	14,816,	14,431,	—	—	14,073,	14,322,
Property Tax	3,127,	3,168,	41,	,385,	3,890,	4,427,
	17,943,	17,549,	41,	,385,	17,963,	18,749,
Crown Lands	84,	81,	—	2,	79,	77,
Miscellaneous	1,150,	1,309,	,158,		1,171,	780,
Totals	19,177,	18,989,	,199,	,387,	19,213,	19,606,
			Net Incr. £188,000			

YEARS, ended 31st March.	1865.	1864.	1865.		Corresponding Years.	
			Less.	More.	1863.	1862.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	22,572,	23,232,	,660,	—	24,034,	23,674,
Excise	19,558,	18,207,	—	1,351,	17,155,	18,332,
Stamps	9,530,	9,317,	—	,213,	8,994,	8,591,
Taxes	3,292,	3,218,	—	74,	3,150,	3,160,
Post Office	4,100,	3,810,	—	,290,	3,650,	3,510,
	59,052,	57,784,	,660,	1,928,	56,983,	57,267,
Property Tax	7,958,	9,084,	1,126,	—	10,567,	10,365,
	67,010,	66,868,	1,786,	1,928,	67,550,	67,632,
Crown Lands	310,	305,	—	5,	300,	295,
Miscellaneous	2,993,	3,035,	43,		2,753,	1,747,
Totals	70,313,	70,208,	1,829,	1,933,	70,603,	69,674,
			Net Incr. £104,000			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST MARCH, 1865:—
APPLICATION.

An Account showing the REVENUE *and other* RECEIPTS *of the* QUARTER *ended 31st March*, 1865; *the* APPLICATION *of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.*

Received:—

	£
Surplus Balance beyond the Charge of the *Consolidated Fund* for the Quarter ended 31st December, 1864, viz.:—	
Great Britain ..... —	
Ireland £998,406	
	998,406
Income received in the Quarter ended 31st March, 1865, as shown in Account I	19,177,151
Amount raised per Act 26 and 27 Victoria, cap. 80, on account of Fortifications, &c.	110,000
Amount raised by the issue of Exchequer Bonds, per Act 27 and 28 Victoria, cap. 74	600,000
Amount received in the Quarter ended 31st March, 1865, in repayment of Advances for Public Works, &c.....	211,699
	£21,097,256
Balance, being the Deficiency on 31st March, 1865, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other charges payable in the Quarter to 30th June, 1865, and for which Exchequer Bills (Deficiency) will be issued in that Quarter	298,714
	£21,395,970

Paid:—

	£
Amount applied out of the Income for the Quarter ended 31st March, 1865, in Redemption of Exchequer Deficiency Bills, for the Quarter ended 31st December, 1864, viz.:—	1,951,840
Amount applied out of the Income to *Supply Services* in the Quarter ended 31st March, 1865	10,545,786
Charge of the *Consolidated Fund* for the Quarter ended 31st March, 1865, viz.:—	
Interest of the Permanent Debt £5,636,874	
Terminable Debt 888,695	
Principal of Exchequer Bills 39,000	
Interest of „ „ 91,599	
„ Deficiency „ ..... —	
The Civil List 101,287	
Other Charges on Consolidated Fund 471,444	
Advances for Public Works, &c. 476,397	
Sinking Fund..... 560,492	
	8,265,770
Surplus Balance in Ireland beyond the Charge of the Consolidated Fund in Ireland for the Quarter ended 31st March, 1865	632,574
	£21,395,970

CORN.—*Gazette Average Prices* (England and Wales), *First Quarter of* 1865.

[This Table is communicated by H. F. Jadis, Esq., Comptroller of Corn Returns.]

Weeks ended on a Saturday 1865.	Weekly Average. (Per Impl. Quarter.)					
	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
January 7	38 2	27 10	19 3	—	—	—
„ 14	38 7	28 –	19 –	—	—	—
„ 21	38 10	28 9	19 1	—	—	—
„ 28	38 6	29 –	19 3	—	—	—
Average for January ..	38 6¼	28 4¾	19 1¾	—	—	—
February 4	38 4	29 2	19 6	—	—	—
„ 11	38 4	29 2	19 8	—	—	—
„ 18	38 4	29 2	19 1	—	—	—
„ 25	38 2	29 –	20 3	—	—	—
Average for February ..	38 3½	29 1½	19 7½	—	—	—
March 4	38 6	28 11	20 2	—	—	—
„ 11	38 4	29 1	20 6	—	—	—
„ 18	38 3	28 10	21 4	—	—	—
„ 25	38 4	28 8	21 1	—	—	—
Average for March	38 4¼	28 10½	20 9¼	—	—	—
Average for the Quarter ..	38 4½	28 9½	19 10	—	—	—

RAILWAYS.—Prices, *Jan.—March;—and* Traffic, *Jan.—March,* 1865.

Total Capital Expended Mlns.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic first 13 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 13 Weeks.		Dividends per Cent. for Half Years.		
		1st Mar.	1st Feb.	1st Jan.	'65.	'64.	'65.	'64.	'65.	'64.	30 Jun. '64.	31 Dec. '63.	30 Jun. '63.
£					No.	No.	£	£	£	£	*s. d.*	*s. d.*	*s. d.*
51,0	Lond. & N. Westn.	116¾	123¼	122½	1,273	1,252	1,275,	1,229,	82	82	57 6	60 –	42 6
45,0	Great Western	73¼	83	79½	1,269	1,231	822,	789,	58	54	30 –	30 –	20 –
16,3	„ Northern....	127½	136	136	404	365	430,	400,	87	85	55 –	87 6	42 6
21,7	„ Eastern	47	47½	48½	663	663	381,	367,	45	43	12 6	25 –	12 6
12,2	Brighton	104	107	106½	267	261	200,	193,	61	72	50 –	50 –	50 –
17,2	South-Eastern	83¾	88½	85¾	308	306	255,	236,	73	67	42 6	58 4	45 –
14,9	„ Western	96½	99½	99	490	454	251,	248,	40	51	45 –	55 –	45 –
178,3		92¾	97¾	96¾	4,674	4,532	3,614,	3,462,	64	65	41 9	52 3	36 9
23,8	Midland.....	132	139½	140½	663	641	579,	560,	69	68	70 –	70 –	57 6
20,1	Lancsh. and York.	114	117¾	116¾	403	402	464,	461,	92	92	57 6	47 6	42 6
3,1	Sheffield and Man.	60½	62½	64	242	242	222,	225,	71	66	27 6	15 –	—
31,4	North-Eastern	103½	115	115¼	1,099	1,095	700,	671,	52	50	55 –	55 –	42 6
88,4		102½	108½	109	2,407	2,380	1,965,	1,917,	71	69	52 6	46 10	47 6
10,2	Caledonian	132½	134	133	281	244	240,	224,	66	73	65 –	62 6	52 6
5,7	Gt. S. & Wn. Irlnd.	90	92	91	387	373	94,	94,	20	22	45 –	45 –	42 6
282,6	*Gen. aver.*	98½	103½	102¾	7,749	7,529	5,913,	5,697,	63	63	47 1	50 10	41 3

Consols.—Money Prices, 1*st Mar.*, 88⅞ 9 (de.) and 88⅞ 9 (acc.)—1*st Feb.*, 89½ ⅝.—2*nd Jan.*, 89⅝ ½ (de.) and 89½ ⅝ (acc.)

Exchequer Bills.—1*st Mar.*, 3*s.* to 6*s.* pm.—1*st Feb.* par to 4*s.* pm.—2*nd Jan.* par to 3*s.* pm.

BANK OF ENGLAND.—Weekly Return.

***Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the* First Quarter (*Jan.—March*) *of* 1865.**

[0,000's omitted.]

1	2	3	4	5	6	7
Issue Department.					Collateral Columns.	
Liabilities.	Dates.	Assets.				
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1865. Per ann.
27,97	Jan. 4	11,01	3,63	13,32	20,50	16 Dec. 6 p. ct.
28,06	,, 11	11,01	3,63	13,41	20,48	12 Jan. 5½ ,,
28,06	,, 18	11,01	3,63	13,41	20,71	
28,22	,, 25	11,01	3,63	13,57	20,15	26 ,, 5 ,,
28,38	Feb. 1	11,01	3,63	13,73	20,53	
28,42	,, 8	11,01	3,63	13,77	20,28	
28,43	,, 15	11,01	3,63	13,78	19,93	
28,41	,, 22	11,01	3,63	13,76	19,66	
28,66	Mch. 1	11,01	3,63	14,01	19,93	
28,56	,, 8	11,01	3,63	13,91	19,83	
28,74	,, 15	11,01	3,63	14,09	19,65	
29,10	,, 22	11,01	3,63	14,45	19,57	
29,22	,, 29	11,01	3,63	14,57	19,95	30 Mar. 4 ,,

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates.	Assets.				
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		Totals of Liabilities and Assets.
Capital.	Rest.	Public.	Private.		(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1864.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,38	8,50	13,87	,49	Jan. 4	11,02	21,71	7,45	,61	40,80
14,55	3,42	4,44	16,17	,53	,, 11	11,02	19,84	7,58	,69	39,12
14,55	3,49	4,19	14,66	,51	,, 18	11,02	18,27	7,35	,76	37,40
14,55	3,48	4,84	14,55	,47	,, 25	11,02	18,05	8,07	,75	37,90
14,55	3,51	5,54	14,45	,47	Feb. 1	11,02	18,92	7,85	,73	38,52
14,55	3,61	6,25	13,81	,46	,, 8	11,02	18,79	8,14	,74	38,69
14,55	3,62	6,57	13,97	,46	,, 15	11,02	18,89	8,50	,77	39,18
14,55	3,60	6,66	14,14	,44	,, 22	11,02	18,79	8,75	,84	39,40
14,55	3,83	6,85	14,16	,45	Mch. 1	11,02	19,30	8,73	,79	39,84
14,55	3,84	7,68	13,90	,45	,, 8	11,02	19,83	8,73	,85	40,43
14,55	3,86	8,35	13,78	,45	,, 15	11,02	20,80	9,09	,79	40,99
14,55	3,91	10,20	13,55	,45	,, 22	11,02	21,26	9,53	,85	42,67
14,55	3,92	9,84	13,48	,44	,, 29	11,02	21,15	9,27	,78	42,23

CIRCULATION.—Country Banks.

Average Amount of Promissory Notes in Circulation in England *and* Wales *on Saturday, in each Week during the* First Quarter (*Jan.—March*) *of* 1865 ; *and in* Scotland *and* Ireland, *at the Three Dates, as under.*

England and Wales.				Scotland.				Ireland.		
Dates.	Private Banks. (Fixed Issues, 4,21.)	Joint Stock Banks. (Fixed Issues, 3,23.)	Total. (Fixed Issues, 7,44.)	Three Weeks, ended	£5 and upwards.	Under £5.	Total. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	Total. (Fixed Issues, 6,35.)
1865.	£ Mlns.	£ Mlns.	£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns
Jan. 7	3,03	2,73	5,75	Jan. 7	1,51	2,81	4,33	2,65	3,01	5,66
,, 14	3,09	2,80	5,89							
,, 21	3,10	2,82	5,92							
,, 28	3,06	2,79	5,84							
Feb. 4	3,04	2,75	5,79	Feb. 4	1,53	2,63	4,16	2,68	3,03	5,71
,, 11	3,01	2,75	5,77							
,, 18	2,95	2,74	5,70							
,, 25	2,92	2,73	5,64							
Mar. 4	2,93	2,73	5,66	Mar. 4	1,49	2,57	4,07	2,72	2,98	5,70
,, 11	2,91	2,75	5,66							
,, 18	2,87	2,74	5,61							
,, 25	2,87	2,74	5,61							

FOREIGN EXCHANGES.—*Quotations as under,* London *on Paris, Hamburg & Calcutta; —and New York, Calcutta, Hong Kong & Sydney, on* London—*with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Paris.				Hamburg.				Calcutta.				
Dates.	London on Paris.	Bullion as arbitrated.		Prem. or Dis. on Gold per mille.	London on Hambg.	Bullion as arbitrated.		New York.	India Council	At Calcutta on London.	Hong Kong.	Sydney.	Standard *Silver* in bars in London.
	3 m. d.	Agnst. Engd.	For Engd.		3 m. d.	Agnst. Engd.	For Engd.	60 d. s.	60 d. s.	6 m. d.	6 m. s.	30 d. s.	pr. oz.
1865.		pr. ct.	pr. ct.			pr. ct.	pr. ct.	pr. ct.	*d.*	*d.*	*d.*	pr. ct.	*d.*
Jan. 7 ..	25·52½	·3	—	3 pm	13·7¾	·1	—	243½	23⅞	25⅜	57	par 1 pm	61⅝
,, 21 ..	,,	·2	—	2	,,	—	—	248½	,,	,,	,, ½	—	,, ½
Feb. 4 ..	·47½	·1	—	1½	,, ½	·1	—	225½	,, ¾	,,	,,	par 1 pm	,,
,, 18 ..	·45	·2	—	1	,, ¾	—	·2	229½	,,	,,	56½	par	,,
Mar. 4 ..	,,	,,	—	,,	·8¼	—	·5	219½	,,	,, ¾	57	,,	,, ⅜
,, 18 ..	·50	·1	—	2	·9	—	·3	217	,,	,,	55½	,,	61

JOURNAL OF THE STATISTICAL SOCIETY,

SEPTEMBER, 1865.

On the "COUNTRY CLEARING." *By* SIR JOHN LUBBOCK, BART., F.R.S., V.P. LIN. S., V.P. ETHN. S., *and Honorary Secretary to the London Bankers.*

[Read before the Statistical Society, June, 1865.]

THE Transactions of the Statistical Society for 1856 * contain an interesting paper by Mr. Babbage on the Statistics of the Clearing House during the Year 1839. It is not my intention in the present paper to follow out the line of thought, or to prosecute the inquiries commenced by Mr. Babbage in that communication; nor is it necessary that I should occupy the time of the Society by any explanation of the general system pursued in the Clearing House.

I may, however, take this opportunity of expressing my opinion that it would be desirable if some arrangement could be made to publish, each week, perhaps at the same time as the Bank of England returns, a statement of the total daily amounts passed through the Clearing House.

Before quitting the subject of Mr. Babbage's paper, I would also say a few words as to two of the four questions which he asks in the first page of his memoir. "In order," he says, "to obtain some "knowledge of the total amount of the sum which changes hands "during the year, it would be necessary to know—

"1st. The proportion of the transactions of bankers which "passes through the Clearing House, to that which does not.

"2nd. The proportion which the transactions of those bankers "who clear, bears to the transactions of the bankers who do not "clear.

"3rd. The proportion which the money transactions of the "capital bears to those of the country.

"4th. The proportion of payments made in bank notes or coin "by the public, both in town and in the country."

As regards the first and last of these questions, I think the experience of our house enables me to give, at any rate a partial and approximate answer.

* Vol. xix, part i, p. 28.

In order to answer the first question asked by Mr. Babbage, namely, "the proportion of the transactions of bankers which passes "through the Clearing House to that which does not," I took an amount of 23,000,000*l.*, which passed through our hands during the last few days of last year, and found that it was made up as follows:—

	£
Clearing	16,346,000
Cheques and bills which did not pass through the clearing	5,394,000
Bank notes	1,137,000
Coin	139,000
Country notes	79,000
Total	23,095,000

This amount is probably large enough to give something like a fair average, but if the Statistical Society would prefer that a larger amount should be taken, I could easily do so, because in taking the particulars of the cash paid into our hands, we divide it as above, in order to assist us in getting the balance right at the close of the day. The "Money" and "Note" columns in these books, which we call "Goldsmith Books," ought to agree with the books at the counter, the clearing column ought to agree with the total amount in the clearing books, and so on. This enables us to get the work right in sections, and when we are wrong at the end of the day, we know in which direction to look for the error. It is hardly necessary for me to observe that the proportions thus obtained apply only to our own business. Probably in no two banks would they be found to be identical, though, if I might venture to express an opinion, I should think that the general average which would be obtained from a similar analysis of the transactions of all the clearing banks would not be very different.

It would appear from this that out of each 1,000,000*l.*, rather more than 700,000*l.* passes through the clearing.

The second amount given above, 5,394,000*l.*, includes of course the transfers made in our own books from the account of one customer to that of another. These amounted to 3,603,000; the remainder, 1,791,000*l.*, representing the cheques and bills on banks which did not clear.

Mr. Babbage's last question has reference to "the proportion of "payments made in bank notes or coin by the public, both in town "and in the country."

In order to ascertain the proportion of payments made in bank notes and coin in town, I have taken an amount, 17,000,000*l.*, paid in by our London customers. This was made up as follows:—

	£
Cheques and bills on clearing bankers	13,000,000
„ ourselves	1,600,000
„ other bankers	1,400,000
Bank of England notes	674,470
Country bank notes	9,470
Coin	117,927
Total	16,802,000

But in order to give a satisfactory answer to Mr. Babbage's question, the above amount of bank notes, small as it is, must, I think, be still farther reduced. All the clearing bankers have accounts at the Bank of England, and as we require notes to supply our till, we draw them from the Bank of England, crediting the bank in our books. Out of the above amount of 674,470*l.*, 266,000*l.* were notes thus drawn by us from the Bank to replenish our till, and did not represent an amount paid in by our customers to their credit. This amount must therefore, I think, be deducted from both sides of the account.

On the other hand, we must add the amount of bills paid in for collection and discount and loans on security, which pass through a different set of books, and which represented a sum of 2,460,686*l.* Making these alterations, we find that out of 19,000,000*l.* credited to our town customers, 408,000*l.* consisted of bank notes, 79,000*l.* of country bank notes, and 118,000*l.* of coin.

	£
Cheques and bills	18,395,000
Bank notes	408,000
Country „	79,000
Coin	118,000
Total	19,000,000

Out of each million, therefore, only 21,500*l.* consists of bank notes, and 6,210*l.* of coin.

If, then, these figures are taken, as I think they may be, to represent fairly the proportion which the use of notes and coin bears in the commerce of London to that of cheques and bills, we shall find that, taking bank notes, country bank notes, and coin together, they figure for less than 37, the other 977 being transacted by means of cheques and bills.

Finally, I have endeavoured to ascertain the average amount of each bill and cheque. The result would, however, vary so much according to the nature of the business, that it is perhaps not of much importance. Nevertheless, some general conclusions are obtainable, and at any rate they will not occupy much space.

As regards cheques, the amount varies very much in different classes. The largest cheques are those used in Stock Exchange transactions; and having taken out the amounts of 1,500 cheques paid into our hands on the last settling day, a number which I thought would be sufficient to give something like an average, I find they represented a total sum of 871,000*l.*, giving an average for each cheque of 579*l.* If the Stock Exchange cheques only had been taken, the average would have been still larger. In order to ascertain the average on ordinary days, I took out the amounts of 1,000 cheques paid in on the 31st May, and found that they represented rather more than 299,000*l.*, giving for each an average of 299*l.* A total of 8,500 clearing cheques, of which 1,849 belonged to a settling day, gave an average of over 300*l.* These cheques include a small number of bills, which it is impossible to eliminate, because when a bill is paid into us on the day it becomes due, we treat it in the same manner as a cheque. These bills are not, however, sufficiently numerous to affect the result. Cheques on bankers who do not clear are much smaller in amount, they do not generally represent commercial transactions, and 1,000 of them represented 80,698*l.*, giving an average of 80*l.* each. If we were to exclude the cheques on Messrs. Overend, Gurney and Co., Messrs. Alexander and Co., and other financial houses, this average would be still further reduced.

As regards cheques on country bankers, I have taken those which passed through our hands on the 3rd and 5th of June last. They were 5,848 in number, and represented an amount of 164,974*l.* 19*s.* 10*d.*, giving an average of 28*l.* each.

Finally, 11,709 bills, forming the majority of those passing through our hands last month, represented 3,342,366*l.*, giving an average of 285*l.* each.

The main object of the present communication is, however, to give the Society, at the request of my friend Dr. Farr, an account of the last important change which has taken place in the business of the Clearing House, namely, the establishment of the system which is technically known as the country clearing.

A country banker receiving from his customer cheques on other banks in the same town, presents them over the counter for payment in the ordinary manner. It is evident, however, that this method of collection can only be practised as between bankers carrying on their business in the same town.

The system of collection as regards other cheques was, until lately, as follows. The country banker A, receiving a cheque drawn on another country banker B, sent the cheque by post direct to B. B then requested C, his banker in London, to pay the amount to D, the London correspondent of A.

In the year 1858, however, it occurred to some of the country bankers that this system was unnecessarily complicated and laborious, and that it might be simplified by the establishment of a central office in London for the special purpose of clearing country cheques. With this object in view, a meeting of country bankers was held on the 29th of September, and a committee was appointed, of which the Honourable Alexander Leslie Melville, of the Lincoln Bank, was chairman, while Mr. William Gillett, with whom more particularly I believe that the idea had originated, acted as secretary.

This committee placed themselves in communication with, and requested the co-operation of, the London Bankers, who held a meeting at the Clearing House on the 12th of October, to take the matter into consideration. It was resolved that we should give the country bankers all the assistance in our power, and with this object a sub-committee, consisting of Mr. Glyn, Mr. Bevan, Mr. Loyd, and Mr. Smith, was appointed to confer with the committee of the country bankers.

On reflection, it appeared to me that the system proposed by Mr. Gillett, though an improvement on the present system, was by no means the best that could be devised, inasmuch as it would necessitate the organization of a large and entirely new establishment, the appointment of one or two experienced and responsible managers, a considerable staff of skilled clerks, and the use of a large office, all of which would have entailed a considerable expense on the country banks. Moreover, every London banker knows that the operations of clearing require so much accuracy and quickness, that we never think of entrusting the operation to any but experienced and skilful hands.

The London bankers on the contrary had, in my opinion, the means of giving the country bankers all the facilities they required without any great additional labour or expense, and I endeavoured to point out in the following paper the manner in which, as it seemed to me, this might be effected:—

Rules for the Conduct of a Clearing of Country Cheques in London.

1. A clearing to be held in the middle of each day for the interchange, among the London bankers, of cheques on their correspondents in the country, placed in their hands for collection.

2. Each London banker to remit for collection to his country correspondents the cheques drawn upon them, saying, "Please say if we may debit you £ "for cheques enclosed."

3. Country bankers wishing to avail themselves of this clearing, to remit their country cheques to their own London agent, to stamp across them their own name and address and that of their London agent.

4. Any country bank not intending to pay a cheque sent to it for collection, to return it direct to the country bank, if any, whose name and address is stamped across it.

5. Each country banker to write by return of post to its London agent in reply, "We credit you £ for cheques forwarded to us for collection in "yours of ." Adding, in case of non-payment of any such cheques, "having deducted £ for cheque returned to Messrs.
"at , and £ returned to Messrs.
"at ."

Of course it could not be expected that the London bankers should undertake so great a responsibility without much reflection. I had to call at every bank, at most of them several times, and explain fully the exact manner in which I proposed to carry out the system. One great objection was, that under the old plan a single banker's payment corresponded to several cheques. Indeed, some of the country bankers, between whose customers there were frequent transactions, used to transmit the cheques on one another daily, paying the difference only once or twice a-week. In these cases, of course, a large additional amount of labour and responsibility would be thrown on the London banker by the new system. We had in London on means of ascertaining the proportion which the payments bore to the cheques, and I applied therefore to Mr. Moilliet, of Birmingham, who kindly made an average for me, from which it appeared that there were about $2\frac{1}{4}$ cheques for each payment. That is to say, that for each 100 cheques which they took in a day's work, they would have to write 40 letters, and we should receive 40 payments on their account.

The proportion would no doubt differ greatly in different banks; the small country banks, which only take a few cheques in a day, would probably show an approximation to equality between the cheques and payments. Again, banks which are situated on the sea side might be expected to show a smaller proportion of payments as compared with cheques. Birmingham, however, is in a central situation, and on the whole it was felt that Mr. Moilliet's experience gave in all probability a fair average.

It is unnecessary for me to trouble the Statistical Society with any detailed description of the actual manner in which I proposed to deal with the country cheques; it will be sufficient to state that, having under the present system the cheque itself before us, while under the old one we had, as it were, to create a new cheque; it became evident to me that it would involve little more writing, to pass two cheques through our books under the new system, than to make one payment under the old one.

While, however, it was easy for me to satisfy myself that this would be the case under our system of book-keeping, it was not so easy to convince other bankers that the same would hold good under theirs. It is a remarkable thing how very much the different London banks differ in their respective systems of book-keeping. When a

bank is small and the transactions are few, it is comparatively immaterial what system is adopted; and when a business has grown to a large size, it is very difficult to make a change. Again, even when similar books are in use in different banks, they as often as not bear different names, and again, the same names are applied to very different books.

For these and similar reasons it was very difficult for me to convince my brother bankers that it would be possible for us to meet the wishes of the country banks and afford them the advantages they desired, without taking upon ourselves a more than equivalent amount of labour. It was, however, felt to be very desirable that the system should be adopted if possible, and it was of course evident that it could not be efficiently carried out except with the cordial co-operation of all the principal clearing banks. I was therefore requested by the committee of bankers to meet the principal clerks of the different houses, and lay before them the details of the manner in which I thought that we might carry out the wishes of the country bankers, without entailing any great additional labour on ourselves.

At this meeting, which took place shortly afterwards, a report was unanimously agreed to, in which the system as suggested by me was recommended for adoption. This report was read to the London bankers, and after the sub-committee appointed for that purpose had conferred with the sub-committee of country bankers, it was resolved "that the papers furnished by Mr. Lubbock, entitled 'Rules for the "'Conduct of Clearing Country Cheques,' be adopted, and it be "recommended that a copy of this paper be sent by each London "banker to their country correspondents." At the same time it was resolved to commence the new system on the 23rd November, which was accordingly done, and a large number of country banks at once availed themselves of it.

Very little consideration is required to see that the London bankers herein undertook an operation of a very novel and delicate character. In the first place, we had to agree our balances among ourselves on one day, and settle them two days after on the return of post. It is evident that the system could not be successfully worked if it were not for the great regularity in the postal communications. So admirable, however, are the arrangements of the post office, and of the various railways, that we have experienced little difficulty on this score.

Again, it must be remembered that the cheques had to be sorted, not according to the banks on which they were drawn, but according to the London correspondents of those banks.

Another practical difficulty with which we had to contend was, that some country banks were in the habit of charging commissions

Although the majority of country bankers paid in full all cheques drawn upon them, there were some large establishments whose custom was to deduct a small percentage. The amounts thus retained were indeed trifling, probably on an average not exceeding a shilling each, still in the aggregate they reached a considerable sum, and the manager of one large country joint stock bank informed me that in the case of his own bank they came to 600*l.* a-year.

The country banks which had been in the habit of charging these commissions, were naturally loth to abandon a source of profit which required no outlay of capital, and involved no risk of loss; and in some cases it was only by insisting that all cheques should either be paid in full or returned to the holders, that the system was broken through. The greater number, however, of the banks which had until that time charged these commissions, voluntarily and very considerately ceased to do so, when it was pointed out to them how much inconvenience was caused by the practice. In fact, the only way in which we could treat the commissions was, by passing fresh entries through all our books for each of them, thus practically doubling the work.

It was of course evident that the proposed system, though much safer, and in many ways more convenient than the old one, involved in many cases a certain loss of time. It was indeed a well established rule, that a banker is not bound to present a cheque for payment the same day that he receives it; that he may present it at any time during banking hours on the following day; and that a cheque drawn on a banker at a distance is legally regarded as presented when it is posted.

Under these circumstances it was evident that the country bankers had a perfect right to send their cheques through London if it was found more convenient to do so. Nevertheless, the country bankers' committee thought it prudent, in order to place the question beyond dispute, to draw up the following case* and submit it to Sir Fitzroy Kelly, who was then Attorney-General, Mr. Wilde, Q.C., and Mr. Braithwaite.

Since this opinion was given, the question has been decided by an action brought against Messrs. Henty and Co., of Worthing. The case was decided in their favour, and the legality of the country clearing thus finally established.

I regret that it is not in my power to give the Society any statistics as to the number or amount of the cheques which pass daily through the country clearing. The system has, however, been adopted by the great majority of country banks, and by having rendered country cheques much more negotiable than was previously the case, has been a great boon to the country.

* See Appendix.

APPENDIX.

CASE.

Many of the leading country bankers have lately had under consideration whether some plan might not be adopted, for obviating many inconveniences which country bankers incur in realizing cheques drawn upon other country bankers, received in the course of their business. In the instances in which the cheques are drawn upon banks situate in the same town little or no difficulty occurs, but when the banks on which the cheques are drawn are at a distance, which is frequently the case, there is both risk and inconvenience attending the procuring payment of them; the course for business with such latter mentioned cheques, is generally for the banker receiving them to transmit them by post to the bank on whom the cheques are drawn, with a request that the amount may be ordered to be paid in London to the credit of the remitting bank, with their London banking agents. A plan has been suggested for establishing in London a central Clearing House for country bankers, to which country bankers may remit for collection all cheques drawn upon other country bankers, instead of remitting such cheques either to the drawers, or to some other party for presentment to them, thus a bank, say Messrs. Lloyds and Co. at Birmingham, upon receiving a cheque drawn on (for instance) Messrs. Gillett, bankers at Banbury, instead of remitting the cheque to Messrs. Gillett direct for payment, would send it to the proposed London Clearing House, and the cheque might be written across or stamped in the manner shown below, to designate the bank remitting the same for collection.

Banbury, 28th May, 1858.

Messrs. JONATHAN, CHARLES, and ALFRED GILLETT,

Bankers, Banbury,

Pay to Self or bearer

Five Pounds.

£5 „ 0 „ 0

G. S.

Through Clearing House.

London.

From LLOYDS & Co.,

BANKERS, BIRMINGHAM,

28TH MAY, 1859

If therefore Messrs. Lloyds and Co. of Birmingham had received, say, forty cheques in any one day upon as many different country bankers, they would remit the whole to the proposed London Clearing House in one envelope, and on the same day on which they received them, instead of having to write and send forty letters to the different bankers (which from the pressure of business they might not be able to send until the post of the following day). At the Clearing House the cheques would be sorted, and lists made out of the cheques drawn on each banker, and transmitted with the cheques themselves to the bank on whom they are drawn, this being necessary in order that the bankers may by inspection satisfy themselves that the cheques are genuine. The bank on whom the cheque is drawn, if it has not effects, or has for any other reason to refuse payment, will be expected to return the cheque direct to the bank whose name and address are stamped upon in, and by the same post advise the Clearing House of having so done. It may be objected against this plan that a delay would be incurred to the prejudice of the drawers or holders of the cheques of one post before the cheque reached the bank on whom they were drawn, since the cheques would not be presented until the day following that

next after the one on which they were sent off, but in answer to this objection it may be observed, that no banker is bound to remit a cheque for collection on the same day as that on which he receives it, and that in practice, as before remarked, he is occasionally from press of business or other cause unable to do so, whereas the banker would always be able to send his cheques to London on the same day that he received them, the London posts generally being later in the day than the country posts; and a cheque, if dishonoured, would be received back in many cases as early as at present. Moreover, the communication by cross-posts is not so certain or expeditious as direct with London, and is more subject to accidents of loss or theft, and in fact no more delay would generally take place by the proposed plan of sending them to a London Clearing House than if the cheque were sent direct on the day after it was received, to the country bank on whom it was drawn, and at the most there would not be more than one post day additional. In adopting the proposed plan of a Central Clearing House what the country bankers would have to guard against, would certainly be the risk of being charged with laches by their customer, for not having duly presented the cheque and not giving timely notice in the event of its dishonour, but it is suggested whether, if there be any such risk, it may not be obviated by inserting a printed notice in the pass book of each customer, that all drafts on other country bankers, would be sent for presentment through the Central Clearing House in London, and that the bankers would not hold themselves responsible for not presenting the cheque direct to the drawees or for not giving timely notice of dishonour. It is also suggested that if the country banks generally adopted the plan of a Central Clearing House, the usage would in the course of time, if general, become binding upon their customers.

It is obvious that if a banker, say at Birmingham, receives a cheque drawn upon a banker at Durham, or other remote place, he cannot be expected to send a special messenger to present it, or incur the risk of sending it to a private person or even to another bank (if there should be one) in the same place, for presentment.

Perhaps the cheque might purport on the face of it to be presentable through the London Clearing House. As all cheques must now be stamped, there does not appear to be any fiscal objection to this course.

It is said in "Chitty on Bills," p. 386, 9th edition (but no authority is cited), that if a cheque on a banker be delivered to a person at a place distant from the place where it is payable, it will suffice to forward it by post or otherwise to some person residing at the latter place on the day after it is received, and it will suffice for him to present it on the third day; this would consume as much time as would be occupied in sending the cheque (by the proposed plan) to London, and thence to the bank on whom the cheque is drawn.

See also the case of Moule *v.* Brown, 5 Scott, 544, 4th Bing. at C. 266 S. C., and the case of Bond *v.* Warden, reported in 1 Collyer's "Chancery Reports," p. 583.

Your opinion is requested—

1. Whether country bankers, receiving in the course of business cheques on other country bankers, will be warranted in transmitting them for collection to such a Central Clearing House as is proposed to be established?
2. If it be considered that banks so remitting cheques for collection will be guilty of laches, whether any difficulty on this point may not be obviated by affixing in each customer's pass book a notice in writing of the course of business adopted for the presentment of country bankers' cheques, or whether the cheques themselves may not be made presentable through the Clearing House, or whether any and what other course should be taken by the country banks to protect themselves from loss on score of laches?
3. Whether the establishment of such a Central Clearing House in London, to which country cheques may be remitted by the country bankers, for the purpose of receiving payment, would be a course of business which, if generally adopted by the country bankers, would become binding upon their customers?

We have considered the foregoing Case, and are of opinion,—

First. That country bankers receiving, in the course of business, cheques on other country bankers, will be warranted in transmitting them for collection to such a Central Clearing House as is proposed to be establised *upon the basis above stated*, in all cases where the bank transmitting cheques to such Central Clearing House, is within such a distance from London as to admit of the cheques so transmitted, being posted from London to the respective banks upon which they are drawn, on the day next after such cheques are first received by the transmitting bank. The rule is well settled, that the holder of a cheque may present it, at any time during banking hours on the day after he receives it, and we apprehend it to be clear, that where the holder and the bankers on whom the cheque is drawn, reside in different places, a cheque *posted* the day after it is received to the bankers on whom it is drawn, would be considered in point of law, as presented in due time, though not in fact actually delivered to such bankers on that day. In cases so circumstanced, the act of forwarding the cheque by the general post is, as regards the question of time, equivalent to presentation. This being so, the proposed arrangement for a Clearing House for country cheques would not, in the case of bankers residing within the limits above specified, have the effect of interfering with the ordinary rule.

But as regards banks situate at such a distance from London as not to admit of the cheques transmitted by them to the proposed Clearing House being posted *from London* to the banks upon which they are drawn, on the day next after such cheques are first received by the transmitting banks, we are of opinion that they could not avail themselves of the proposed arrangement, without incurring the risk of being made liable to the losses which may arise from the non-payment of such cheques on their presentation or transmission after the time limited by law.

Secondly. As regards banks lying beyond the requisite distance from London, we think that the difficulty may be obviated by giving to each of their customers distinct notice of the course of business adopted for the presentment of country bankers' cheques, through the medium of the proposed Clearing House. This notice may probably be most conveniently given, as mentioned in the Case, by means of a printed notice in each customer's pass book, but we do not think that it would be sufficient merely to state upon the cheques, that they are presentable through the Clearing House, unless it were proved that the customers signing such cheques clearly understood the course of business adopted at the Clearing House.

Thirdly. We do not think that the establishment of the proposed Clearing House can create a usage, binding on parties *not cognizant of it*, at variance with the existing law.

FITZROY KELLY.
JAMES WILDE.
J. B. BRAITHWAITE.

Temple, 27th July, 1858.

On the Economic Condition *of the* Highlands *and* Islands *of* Scotland. *By* Leone Levi, Esq., F.S.A., F.S.S., *of Lincoln's Inn, Barrister-at-Law, Doctor of Economic and Political Sciences of the University of Tübingen, and Professor of the Principles and Practice of Commerce in King's College, London.*

[Read before the Statistical Society, June, 1865.]

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I.—*Introduction.*

As the season approaches when the toiled and careworn legislator, merchant, and banker, will cheerfully leave the Palace of Westminster, the counting house and the clearing house, for some invigorating exercise and recreation; some on the beautiful Rhine and some on the Alpine regions of Switzerland and Italy; some to wander through Britany and La Belle France, and some to enjoy the delightful scenery of England, Ireland, and Scotland; it may be, that in directing the attention of the Society to the economic condition of the Highlands and Islands of Scotland, a few may be induced to visit those mountainous and romantic districts, and that some topics for thought and reflection may be afforded, which may bring forth fruitful schemes of industry and improvement. Unhappily I cannot indulge on history or romance, on pictures of natural scenery, or even on the attractive chivalry of clanship. The labours of statists and economists are necessarily more recondite and searching, and we can only hope that what, doubtless, we lose in the æsthetic and descriptive, we may gain in depth of thought and comprehensiveness of principle.

Whilst all around we have the most tangible evidence that the United Kingdom, as a whole, has for a long period of time enjoyed

an uninterrupted course of material prosperity, there are not a few spots within these favoured isles which are subject to many paralysing and deteriorating influences. Nature, so prodigal to some, has denied many of her gifts to other parts of the British Islands. The disparity of condition, for instance, between England and the Highlands and Islands of Scotland, is most remarkable. Here, are smiling corn fields, rich pasture lands, and golden deposits of mineral produce; there, an unpropitious soil and barren mountain heath. Here, roads, canals, and railways intersect the country in all its length and breadth; there, the means of communication are most imperfect, and the greater part of the territory is quite inaccessible. Here, not a spot but is trodden and explored, not a resource but is developed to the greatest possible extent; there, the soil is rugged, wild, and neglected, the resources unknown and unavailable, and capital, the soul of industry and commerce, is quite beyond the reach of the forlorn inhabitants.

II.—*Geography.*

Considerable difficulty is experienced in determining the territory of what are called the Highlands and Islands of Scotland, since they have in fact no precise and ascertained boundaries coinciding with the limits of any civil jurisdiction. The popular division of Scotland into highlands and lowlands, would seem to distinguish the mountainous from the flat portion of the country, and some take the Grampians as the natural separation between the Highlands and and other parts of Scotland. But all Scotland is more or less mountainous. The valley known as Strathmore, or the "Great "Strath," forms perhaps a better division.* Some, again, take the Highlands to comprise the northern and western portions of Scotland, and the Lowlands the southern and eastern portions. The best guide probably would be to take the Highlands as comprising that extent of territory where the Gaelic language is still in use, but this is being gradually reduced by the inroad of English literature. The principal highland counties certainly are Argyll, Inverness, Ross and Cromarty, and Sutherland; but many parishes must be added to them in Aberdeen, Caithness, Elginshire, Banffshire, Dumbartonshire, and Perthshire. Exclusive, however, of these parishes, the four highland counties, including the Hebrides or Western Islands, 186 in number, form a large territory, comprising some 13,000 square miles out of a total area, for the whole of Scotland, of 30,685 square miles. To obtain a complete view of the economic condition of the Highlands and Islands of Scotland, it would be necessary to examine

* Conformably with this division between Highlands and Lowlands, there is the division of races. The Celtic area comprehends all Scotland west of Strathmore, the region of *bens*, and *glens*, and *straths*. See Hughes' "Geography of British "History," p. 481.

the condition of those parishes as well. This, however, cannot be done, because the information we possess as to area, geology, agriculture, and other items, can only be obtained for each county as a whole.* And as it would be erroneous to take the whole of Perthshire, Elginshire, or Aberdeenshire, as highland counties, the half, and in some cases two-thirds of them, belonging absolutely to the lowlands, in order to limit ourselves to ascertained facts, we must confine this paper exclusively to Argyll, Inverness, Ross and Cromarty, and Sutherland, which are purely highland counties, and which, moreover, comprise nearly all the islands forming the Outer and Inner Hebrides. Of these four counties, Inverness and Argyllshire are the most peculiar in the formation of the land. In few other places on the surface of Europe do we see such an agglomeration of mountains, lakes, and islands, and with the sea penetrating inland through a thousand creeks. Many of the Scottish islands stand alone in the ocean, the picture of a dreary solitude.

III.—*Geology.*

The geological condition of the country is of great importance. In Nicol's "Guide to the Geology of Scotland," the 31,000 square miles forming the entire area, are shown to comprise 15,500 square miles of gneiss, quartz rock, mica slate, and granite, 2,700 of trap, 1,750 of coal formation, 4,700 of clay slate, and 4,900 of old red sandstone. What there is of clay, coal, or even red sandstone, is only, however, in the south and centre; the northern districts having formations on which very little will ever grow. We might expect that even granite and other rocks might in time become the bed of a moderately good soil under the combined influence of air and water, but such is the elevation of the country, and the great exposure of such rocks, that whatever soil may be formed, long before it has time to increase and consolidate, it is swept away by the winds and snow storms. The mountain elevation is indeed very great. It is not so much the great height of the mountains, be it Ben Nevis (4,460 feet high), Ben Mac Dhui (4,396 feet high), or Lochnagar (3,800 feet high), or Ben Lomond (3,190 feet high), as is the frequency and number of them that gives a character to the land and its cultivation. The relation of geology to agriculture is very direct. It is known, for instance, that wheat in Scotland will not grow at a greater elevation than 700 feet, the usual limit being 500 feet; while oats seldom ripen above 1,200 feet, though cultivated in limestone soil to 1,500 feet; and hence it is that in very mountainous districts, and in cold seasons, oats are a very uncertain crop, being either destroyed by rain or nipped by frost.

* It is to be regretted that the Ordnance Survey is not published for any of the highland counties.

IV.—*Meteorology.*

Equally important is the meteorology of the country. It is said, that whilst on the east side of Scotland, the quantity of rain varies from 22 to 25 inches; on the western side, and on the Hebrides, the fall is from 35 to 46 inches.* So retentive indeed is the soil of such dampness, that nothing but a very hot summer sun, which seldom makes its appearance, can remove it effectually. Professor Hughes, in his Atlas, gives the average temperature for the year in London, at 50·83, and in Aberdeen 49·18; for the summer, in London 62·95, and in Aberdeen 59·53; and in winter, London 39·50, and Aberdeen 39·03. In the western and northern portion of Scotland, the crops suffer from the sea blighting them before they reach maturity, and the high winds shake the grain from the ear when ripe. Altogether the severity and uncertainty of the climate are such, as to render the labour of the husbandman comparatively barren indeed of profitable results.

V.—*Population.*

That a country so rugged and mountainous, so exposed and yet so inaccessible, should have but a limited population, is what we may expect. According to the census of 1861, the population of the four counties, which include the Hebrides, were as follows:—

Counties.	Area in Square Miles.	Population.	Number of Persons to each Square Mile.
Argyll	3,255	79,724	24·5
Inverness	4,255	88,888	20·8
Ross and Cromarty	3,151	81,406	25·8
Sutherland	1,886	25,246	13·3
	12,547	275,264	21·93

This gives the very small proportion of only 22 persons to each square mile, and it is singular that whilst these counties comprise more than 40 per cent. of the total area of Scotland, their population amount to less than 10 per cent. By the census of 1861, Scotland

* Prof. Symons, M.B.M.S., in his report on the fall of rain in the British Isles during the years 1860 and 1861 to the British Association for the Advancement of Science, gives the average fall of rain in the west midland counties of Scotland, including Stirling, Bute, and Argyll, at 52·278 inches for 1860, and 63·377 inches in 1861; in the north western counties, including Ross and Inverness, at 44·623 inches in 1860, and 67·306 inches in 1861; and in the northern counties, including Sutherland, Orkney, and Shetland, at 34·128 inches in 1860, and 38·746 inches in 1861. In the year 1861, Scotland, especially the western coast, was subject to almost unprecedented rains. ("Report of the Thirty-second Meeting of the "British Association for 1862," p. 296.)

was divided into two groups, mainland and islands. Of the total population of 3,062,294 persons on the 8th April, 1861, there were 2,897,300 persons on the mainland, and 164,994 persons in the 186 inhabited islands which lie around it, giving a proportion of 94·61 per cent. of the population on the mainland, and 5·39 per cent. on the islands. A better idea of the limited number of people living in the highlands may be formed by comparing these counties with the other counties of Scotland itself, and with other European countries. According to the census of England and Wales, and the statistical tables relating to foreign countries published by the Board of Trade, part ix, 1864, the proportion of population to area was as follows :—

Countries.	Years.	Average English Square Miles.	Population.	Average to One English Square Mile.
Belgium	1861	11,267	4,782,255	424
England and Wales	,,	58,320	20,061,725	344
Italy	,,	98,154	21,920,269	223
France	,,	207,480	37,386,313	180
Ireland	,,	32,513	5,798,967	178*
Prussia	,,	107,184	18,491,220	172
Portugal	1863	36,310	4,035,330	111
Other counties of Scotland	'61	18,138	2,787,000	153
Spain	'60	190,325	15,421,495	81
Sweden	'61	168,042	3,859,728	23
4 counties of Highlands and Islands	,,	12,547	275,264	22

* The census of Ireland, besides the proportion of population to the total area, gives the number of persons to the square mile of arable land, but in doing so it necessarily divides the rural from the civic population. It is not intended that the proportion of persons to the square mile of the total area is of itself a sufficient guide to any correct conclusions. It only represents in bold relief the density of population in any country, and leads to further inquiry.

Another important fact in the population of these counties is the extremely small number of towns. In all these four counties there were only 57 cities, towns, and villages; 1 having a population of 12,000 and 1 of 6,000; 4 of 2,000 to 3,000; 7 of 1,000 to 2,000; 14 of 500 to 1,000; and 29 under 500; the proportion being as follows :—

Counties.	Towns and Villages.	Population.
Argyll	9	16,246
Inverness	6	17,227
Ross and Cromarty	32	21,427
Sutherland	10	6,725
	57	62,625

This population gives a proportion of 22 per cent. living in towns and villages, to 78 per cent. living in the country part. It is a more striking fact, however, that in all these four counties, with a total area of upwards of 12,000 square miles, there were only six towns of 2,000 persons and upwards.

The population of the Highlands and Islands of Scotland has indeed made very small progress in the last hundred years. Taking Sir John Sinclair's "Statistical Account of Scotland for 1755," and the census of the different periods during this century, we have the following facts:—

Counties.	1755.	1801.	1861.
Argyll	63,291	81,277	79,724
Inverness	64,656	72,672	88,888
Ross and Cromarty	47,656	56,517	81,406
Sutherland	20,774	23,117	25,246
	296,377	233,583	275,264

These figures show an apparent increase of about 17 per cent. in the last sixty years, but the increase for the whole of Scotland during the same period, has been 90 per cent., whilst the change is still greater when we consider the removal and emigration of the original Highlanders, and the introduction into the Highlands of a large number of Lowlanders. Within the last twenty years, however, there has been a decided decrease. In Argyllshire, in 1841, the population was 97,371; in 1861 it was 79,724. In Inverness, in 1841, it was 97,799; in 1861 it was 88,888. Altogether the population of the four highland counties, in 1841, was 298,637, and in 1861 275,264. We should moreover observe, that between 1851 and 1861 as many as 113,000 Scotch have emigrated, a great portion of whom were Highlanders.

VI.—*The Clearances.*

To what then are we to attribute this comparative stagnation in the population of these counties? The principal cause has certainly been the physical character of the country, as already described, which does not admit of great traffic or large resources. But a prominent secondary cause has been the revolution in agriculture, which has greatly diminished the employment of labour. In olden times, when the highland chieftains were maintaining a numerous train of followers, and the value of an estate was calculated not by the produce it gave, but by the number of men it could raise, the land was occupied by tacksmen, mostly all related to the proprietor, and these held it in common, or alternate ridges, forming a kind of

subtenancy among themselves.* A large number then lived on the land, and though the occupiers got but a scanty subsistence from it, they were too much accustomed to privations and military life to offer any complaint. With the Rebellion, however, of 1745, and the consequent Act for disarming the Highlands, as well as the abolition of the hereditary right of clanship, the existing relation between chieftains and dependants was broken asunder.† The object which induced the subdivision of land among a large tenantry was no longer in existence, and the attention of landlords was devoted to the purely economic question of how to extract the greatest amount of produce at the least possible expense of labour and capital. Finding, then, that as matters were, scarcely any money rent could be got from land, that the soil and climate forbad any great extension of tillage, and that the only mode of beneficially employing the land was by converting the small holdings into extensive sheepwalks, many of the proprietors, setting aside all considerations of duty towards their tenants, disregarding all the sentimental attachment which bound such tenants to the land which they had so long cultivated, and thinking, no doubt, that in the end they were doing their best for all parties, removed from such land their tenants and their families, destroyed their houses, and turned their fields into pasturage. The success of the enterprise attracted capital from other parts of Scotland, and gradually flocks of sheep filled the place which men so unwillingly deserted. Again and again these clearances have been continued, down even to the present time; and it is impossible to read the account of such transactions without feeling sympathy for those large bands of men, women, and children, who, with their scanty household furniture, and all their lares and penates with them, were driven out from their own soil to find shelter where best they could.‡ And whither did they go? Many emigrated; but many more remained at home. It so happened that all around the coasts the sea is full of fish, and the land is, to a considerable extent, capable of cultivation. It seemed an order of Providence that, whilst the interior was better fitted for pasture land, the territory around the coast could be used for cultivation, whilst the fisheries could afford some means of subsistence. And the people were encouraged to settle there. But the land thus occupied was far too limited, the soil comparatively inferior, and the majority of the people did not take kindly to fishing. Hence the overcrowding. Hence the failure.

* Besides the croft land, each crofter had a right to a common on which stock was grazed, each having a right to send a certain number of cattle, horses, or sheep.

† See, in the Appendix, Sir John McNeill's account of the relation of crofters and proprietors.

‡ Read an account of such clearances in the "Times" for May, 1845.

And hence the starvation of certain districts side by side with the apparent prosperity of other portions of the country.

VII.—*Effect on the Employment of Land.*

As might have been expected these clearances had a direct effect on the employment of the land, and we have now such a division of the soil as is not probably to be seen in any other part of Europe. The leading facts are, a very small number of proprietors, a comparatively very small number of acres under rotation of crop, extensive sheepwalks, and a very low valuation or rental in proportion to area and population. First, let us see how land is owned in these counties.

Under the operation of the old laws of entail and primogeniture, founded on the Roman law, land in Scotland is owned by very few; and some of the proprietors possess a territory greater far than is owned by many European sovereigns and princes, but very little indeed is the use they make of such large possessions. Comparing the number of proprietors, as given in Mr. Dunlop's Return of the number of proprietors in each county in Scotland standing on the Valuation Rolls made up under the Act 17 and 18 Vict., cap. 91 (207 of 1856), with the extent in statute acres given in the census of 1861, we have the following enormous average quantities as owned by each proprietor; the two counties, Argyll and Ross and Cromarty, being widely different from the other two, Inverness and Sutherland.

Counties.	Number of Proprietors.	Total Area.	Number of Acres per Proprietor.
Argyll	180	2,683,126	11,570
Inverness	1,021	2,723,521	2,667
Ross and Cromarty	117	2,016,375	17,234
Sutherland	272	1,207,188	4,437
	1,590	8,030,210	5,037

Important, however, as is the fact, that counties so extensive are in the hands of very few, still more telling is the mode in which the land is used or appropriated. According to the Agricultural Statistics for Scotland, collected for several years by the Highlands and Agricultural Society, the land in these counties in 1854-57 was apportioned as follows:—

Counties.	Number of Acres under Tillage.	Number of Acres in Grass.			Sheepwalks.	Houses, Roads, Fence.	Waste.	Woods.	Total.
		In the Rotation of the Farm.	Permanent Pasture.	Irrigated Meadows.					
Argyll	89,649	36,151	164,453	7,021	977,784	10,355	90,747	22,353	1,398,613
Inverness	70,807	15,313	94,223	2,703	1,214,189	1,836	71,781	7,929	1,478,781
Ross and Cromarty	98,366	19,641	52,337	842	723,879	2,086	146,542	26,675	1,070,368
Sutherland	21,121	3,936	6,164	108	356,646	652	24,944	16,653	430,224
	279,943	75,041	317,177	10,674	3,272,498	14,929	334,014	73,610	4,377,986

Here, then, we have the important result that together with a small proprietorship scarcely one-half of the total extent of the land is accounted for in any way. And what are the causes? Chiefly the nature of the soil; partly neglect; and in a great measure deer forests.

VIII.—*Deer Forests.*

Deer forests enter largely into the economics of the Highlands. It is estimated that about 2,000,000 acres of land are so used. We may well doubt the propriety of appropriating any extensive tract of country to deer forests. It may be a manly sport—so intense is the excitement occasioned by the pursuit of the red deer; but when we see miles and miles of land of so-called deer forests, in many cases, however, having not a single tree, yet possessing within them much land well capable of cultivation, from which the hand of man is purposely kept away, we are apt to ask, wherefore this waste? Are the proprietors justified so to appropriate the land to the sport of a few individuals, whilst a large population have but a few acres wherefrom to derive a livelihood? Yet it is a matter of fact that not only large tracts of land are kept out of cultivation in order to keep them as preserves for game, but that land previously under tillage, or laid out as sheepwalks, has been converted into deer forests, and that extensive clearances have been made for the purpose. It might be supposed that if the land admitted of cultivation, the landowners would be more alert in bringing it under tillage, and would prefer using it in that manner rather than letting it as deer forests. But even should the rental from either mode be equal, might we not expect that preference should be given to cultivation, which would afford employment to a large number of persons? Can we, however, say that deer forests subserve the purpose of production—the increase of national wealth? The rent paid to the landowners represents only the amount devoted to enjoyment. It only changes hands as between sportsmen and landowners. Whilst the production of game or venison has only an exceptional market value. Are not,

moreover, the landowners bound by natural laws to keep their land in trust for the people, for public uses, and for public benefit.*

IX.—*Sheepwalks.*

The next important fact in the use of the land, is the large proportion of sheepwalks as compared with tillage land. The proportion in the Highland counties was as follows:—

Counties.	Number of Acres under Cultivation.	Number of Acres in Sheepwalks.	Number of Acres of Sheepwalk to each Acre of Tillage Land.
Argyll	89,649	977,784	11
Inverness	70,807	1,214,000	17
Ross and Cromarty	98,366	720,000	7
Sutherland	21,121	356,000	16
	279,943	3,270,784	12

Here we have twelve acres appropriated to sheepwalks to one appropriated to tillage,† the result as we have seen of the preference

* Mr. James Loch's "Account of the Improvement in the Estates of the "Marquess of Stafford, in the Counties of Stafford and Salop, and on the Estate of "Sutherland." London, 1820.

† A comparison has been made between deer forests and public parks. Both, it is true, comprise land kept out of cultivation for purposes of enjoyment. But whilst public parks greatly promote the health and enjoyment of the masses of the people, deer forests are reserved for the sport of a few individuals. Parks are public property purposely devoted to a great economic object—the improvement of the people. Deer forests are private property, shut out from public use, and in many cases diverted from a fruitful to a fruitless occupation. Again, it has been represented that deer forests employ as many persons as foresters, as sheepwalks employ shepherds. But are foresters producers? The same quantity of land that will maintain 2,000 sheep, will not give 300 deer. Of deer a large number run away, many die, and very few are killed. In truth deer forests are exclusively intended for sport and luxury, and production enters in no manner into their economics. Mr. John Stuart Mill, in his work on "Political Economy," vol. i, p. 282, clearly lays down the compact which exists between the landowners and the State as regards property in land, as follows:—"Landed property is felt, even by "those most tenacious of its rights, to be a different thing from other property; "and where the bulk of the community have been disinherited of their share of it, "and it has become the exclusive attribute of a small minority; men have generally "tried to reconcile it, at least in theory, to their sense of justice, by endeavouring "to attach duties to it, and erecting it into a sort of magistracy, either moral or "legal. But if the State is at liberty to treat the possessors of land as public "functionaries, it is only going one step further to say that it is at liberty to discard "them. The claim of the landowners to the land is altogether subordinate to the "general policy of the State. The principle of property gives them no right to the "land, but only a right to compensation for whatever portion of their interest in "the land it may be the policy of the State to deprive them of. To that their "claim is indefeasible. . . . But, subject to this proviso, the State is at liberty "to deal with landed property as the general interests of the community may "require, even to the extent, if it so happens, of doing with the whole what is "done with a part, whenever a bill is passed for a railway or a new street. The

for, and in many cases substitution of the one for the other Whence this great preference given to sheepwalks? Does the tillage land fail to give a proper return? Let us examine the economics of this kind of cultivation. The portion of land now under tillage, is let out to occupiers who may be divided into two classes, viz., those whose rent is below 20*l.*, and those whose rent is at or above that sum. The agricultural statistics for 1857 take account of the latter only, but in a Report of the Highland Society on the Agricultural Statistics of Small Holdings for Scotland for 1855 (343 of 1854), the number of occupiers and acreage occupied by small tenants is specially given.* The returns thus combined, show the following facts:—

Counties.	Number of Occupiers at or above 20*l.*	Number of Acres.	Number of Occupiers below 20*l.*	Number of Acres.	Total Number of Occupiers.	Total Acreage.	Average Number of Acres per Occupier.
Argyll	1,584	69,773	2,845	19,876	4,429	89,649	20
Inverness	734	42,920	4,554	27,887	5,288	70,807	13
Ross and Cromarty	865	72,851	6,131	25,515	6,996	98,366	14
Sutherland	137	9,960	2,657	11,161	2,794	21,121	7½
	3,320	195,504	16,187	84,429	19,507	279,943	14

Side by side, therefore, with the large tracts of land dedicated to pasture, and tenanted by very few, we find that the land under tillage is parcelled out among a small tenantry of crofters, each holding a croft which, under the best circumstances, is incapable

" community has too much at stake in the proper cultivation of the land, and in " the conditions annexed to the occupancy of it, to leave these things to the discre- " tion of a class of persons called landlords, when they have shown themselves unfit " for the trust."

* For some years past there has been an increasing tendency towards the amalgamation of lands. The system of large culture is very generally upheld in this country, and even in Ireland the number of small holdings is greatly diminished. Comparing 1851 with 1861, the result given in the census report of the respective sizes of holdings was as follows:—

Size of Holdings.	1851.	1861.	Decrease per Cent.	Increase per Cent.
1 to 5 acres.....	310,436	84,463	72·8	—
5 „ 15 „	252,799	183,031	17·6	—
15 „ 30 „	79,342	140,218	—	76·7
Above 30 „	48,625	157,957	—	224·8
	691,202	565,669	18·2	—

In this classification no distinction is made of land under tillage and used for pasture.

of sustaining the tenant and enabling him to pay the necessary rent. This will be seen by comparing the rental with the number of occupiers, and the probable produce of the land with the total population. The amount of rental was given first in Mr. Lockhart's return of the valuation of the counties of Scotland (408 of 1856), and secondly in Mr. Dunlop's return of the valuations in the several parishes in every county of Scotland, of the land and heritages in each parish (113 of 1865). According to these returns, the relation of the occupiers to rental was as follows:—

Counties.	Number of Occupiers.	Rental.	Per Occupier.
		£	£
Argyll	4,429	248,840	56
Inverness	5,288	178,389	34
Ross and Cromarty	6,996	169,565	24
Sutherland	2,794	46,789	17
	19,507	643,583	33

Is a croft worth 33*l.* of rental on an average, capable of maintaining a family? In the opinion of Mr. Ramsay, of Islay, land worth at least 40*l.* or 50*l.* is needed to support a family who do not work for wages, or look to extraneous sources for support. But take the probable produce of such land as compared with the population as a better indication. Assuming, as Mr. Ramsay estimated, the rental to represent one-third of the entire produce of the land, an estimate rather above than below what is actually grown, we have the following facts:—

Counties.	Population.	Rental.	Probable Total Produce.	Produce per Head.	Rental per Head.
		£		£ *s.*	£ *s.*
Argyll	79,724	248,840	745,720	9 6	3 2
Inverness	88,888	178,389	535,167	6 –	2 –
Ross and Cromarty	81,406	169,565	508,695	6 5	2 –
Sutherland	25,246	46,789	140,367	5 10	1 17
	275,264	643,583	1,930,749	7 –	2 8

According to this calculation, agriculture, which is the chief occupation of the people in the Highlands, produces little more than 7*l.* per annum, or less than 3*s.* a-week per head on an average. Is it morally possible that such an income can supply them with food, house, clothing, and other necessaries of life? With a good crop of potatoes and some supplement from the fisheries, they may succeed in

obtaining a precarious livelihood. But with bad crops and other mishaps, they are necessarily exposed to periodical famines.*

It is to facts like these that we owe the great preference given to sheepwalks in the highlands, and hence it is that instead of a superabundant population, we see an immense number of sheep. The proportion of sheep to population in these counties was as follows :—

Counties.	Population in 1861.	Number of Sheep.	Proportion of Sheep per Man.	Number of Cattle.
Argyll	79,724	827,113	10	61,543
Inverness	88,888	607,614	6¾	23,309
Ross and Cromarty	81,406	304,444	3¾	17,610
Sutherland	25,246	202,551	8	3,789
	275,264	1,941,551	7	106,151
All Scotland, 1861	3,062,294	5,683,168	1¾	974,437
England and Wales, 1861	20,000,000	26,000,000	1¼	4,500,000
France, 1861†	36,000,000	37,000,000	1	2,000,000
Australian Colonies, 1862	1,134,395	18,298,393	16	3,575,000

† From a paper read at the Central Agricultural Society of France, it appears that of late years the number of sheep has been considerably reduced in consequence of a great mortality.

* As a general proposition, says M. Say, everything else being equal, the number of men is in proportion to the quantity of production. This is a truth admitted by the greater number of economists. Consequently nothing can increase population except absolutely and permanently what favours production; and nothing can diminish population in a permanent manner but what attacks the source of production. It has been said that a large population is always the sign of a high prosperity. It is the certain sign of a great production; but there cannot be prosperity unless the population has abundance of the necessaries of life and some of its superfluities. There are many parts of China and India immensely peopled, which are notwithstanding wonderfully miserable; but it is not by diminishing the number of individuals that they will be better provided, since that cannot be done without also diminishing their production. What is wanted is not the diminution of the number of men, but an increase of the quantity of produce, which will always take place when the population is active, industrious, economic, and well governed. Whilst, therefore, as a general principle the population should be proportionate to production, it is the amount of industry, the mother of production, which exercises a fundamental influence on the population of States. See "Stewart's Political "Economy," vol. i, chap. 4; Quesnay, article "Grain" in the "Encyclopædia;" Montesquieu, "Esprit de Lois," book xviii, chap. 10, and book xiii, chap. 10; Buffon, Bernard edit., vol. iv, p. 266; Forbonnais, "Principes et Observations," pp. 39, 45; Hume's "Essays," part ii, Essay 11; Poivre, pp. 145, 146; Condillac, "Le Commerce et le Gouvernement," part i, chap. 24, 25; Count Verri's "Reflections on Political Economy," chap. 21; Mirabeau's "Ami des hommes," vol. i, chap. 2; Raynal's "History of the Establishment, &c., &c.," book xi, sec. 23; Chastellu, "De la Félicité Publique," vol. ii, p. 205; Necker, "Administration "des Finances de France," chap. 9, and his notes on the "Eloge de Colbert;" Condorcet, "Notes on Voltaire," Kehl edit., vol. x, 4, v, p. 60; Smith's "Wealth "of Nations," book i, chaps. 8 and 11; Garnier, "Abrégé Elémentaire," part i,

It is a curious fact that whilst there were in these Highland counties only 22 persons per square mile, of sheep there were 154, so that in wandering among the Highlands, if the sheep were going in units, as men do, the chance of meeting a sheep would be seven times greater than of meeting a man.

In truth the position of these four counties of the Highlands and Islands of Scotland is most unsatisfactory. On the one hand, we have an immense territory deserted or dedicated to pasture, with but few scattered individuals here and there. On the other, such small tracts of land as are under tillage, are subdivided into holdings so small that they provide very insufficient means of livelihood. How can these conflicting circumstances be in any way modified? By what means can the condition of the people be improved and yet let the land be used to the best advantage? According to some, the only mode of solving the problem is by converting all the cultivable land into sheepwalks, and by stimulating the emigration of the remainder of the population. Others, who have equally at heart the wellbeing of the country, and who are as conversant with the state of the people, take a widely opposed view, and would rather see a greater portion of land brought under tillage. What they demand are conditions more favourable to the tenancy of land,—such as the granting of leases as in the lowlands, and the investment of more capital in the way of drainage and fencing of land, good cottages, &c. Legally, of course, the landowners are quite at liberty to use their land in whatever manner they please. The only question is, which is economically the best plan?

X.—*Advantages and Disadvantages of Cultivation.*

What regulates the employment of land and the method of cultivation in Scotland, as in any other country, is, and must always be, the amount of benefit derived from it. Land is cultivated as long as it is productive. It ceases to be cultivated when it ceases to be productive. Whether land shall be placed under tillage or let out as sheepwalks; whether the arable land shall be sown with grain or planted with potatoes, will always depend on what is likely to give the best return. It must be admitted that there are discouragements to the extension of cultivation of any kind in these northern counties. Here we have to deal with an inferior land, and with the

chap. 3; Herrenschwand, "De l'Economie Politique Moderne," p. 2; Godwin, "De la Justice Politique," book viii, chap. 3; Jeremy Bentham, "Théorie des "Peines et des Récompenses," vol. ii, p. 304; Clavière, "De la France and des "Etats Unis," 2nd edit., p. 60 and 315; Browne—Dignan, "Essai sur les Principes "de l'Economie Politique," p. 97, London, 1776; Becoaria, "Elementi di Economia "Publica," parte prima, caps. 2 and 3; Gorani, "Recherches sur la Science du "Gouvernement," vol. ii, chap. 7; De Sismondi, "Nouveaux Principes d'Economie "Politique," book vii, chap. 1; Malthus, "On Population."

greatest uncertainty as to the crops from the superabundance of rain. In some cases where attempts have been made to effect improvements, large sums have been sunk in vain. And with the low range of prices of all kinds of grain, which we have had for many years past in consequence of the beneficent operation of free trade in corn, it does not pay to bring very inferior land under cultivation. In truth, with the chances of bad harvests every two or three years, it probably costs more to bring a quarter of grain of home produce to market than it would to import it from Russia or Germany. As an evidence of the uncertainty of the crop, the following facts are extracted from the agricultural statistics:—

Counties.	Wheat per Acre.							
	1854.		1855.		1856.		1857.	
	Bush.	pks.	Bush.	pks.	Bush.	pks.	Bush.	pks.
Argyll	27	2	31	1¼	30	2¼	31	3½
Inverness	28	1	24	2¼	28	–	24	–
Ross and Cromarty	29	1	26	9	28	3¾	26	2¾
Sutherland	34	–	34	1¾	35	–½	22	1½

Counties.	Oats per Acre.							
	1854.		1855.		1856.		1857.	
	Bush.	pks.	Bush.	pks.	Bush.	pks.	Bush.	pks.
Argyll	33	1	30	3¼	34	1	34	3¾
Inverness	32	–	26	2	27	3	28	3¾
Ross and Cromarty	37	1	30	2¼	37	3¼	33	1
Sutherland	37	–	32	2¼	37	–½	31	2¼

Counties.	Potatoes per Acre.							
	1854.		1855.		1856.		1857.	
	Tons	cwts.	Tons	cwts.	Tons	cwts.	Tons	cwts.
Argyll	1	14	5	2	1	17	2	9
Inverness	1	17	4	3½	1	19½	2	7¼
Ross and Cromarty	1	7	4	12¾	2	16	1	19½
Sutherland	3	11	4	8	3	5¾	2	2½

Here it will be seen that the wheat crop of Sutherland, from 1856 to 1857, fell from 35 to 22 bushels per acre, and in Inverness from 28 to 24. The oat crop in Inverness was 32 bushels in 1854, and 26 in 1855. Whilst the potatoe crop shows great disparity, especially in Argyll, from 1 ton 14 cwts. in 1854, to 5 tons 2 cwts. in 1855; and again, as low as 1 ton 17 cwts. in 1856. These, it must be confessed, are practical difficulties in the tillage of land, though probably not greater than exists in other parts of the country. But if grain do not pay, wool and

mutton, the produce of those extensive sheepwalks, have, for many years past, brought a very high price. The large increase of exports of woollen manufactures, the high price of cotton, and the large home consumption, have greatly enhanced of late the value of wool; and as for meat, we all know how high is the cost in the London market. All these circumstances seem certainly to favour the conversion of land into sheepwalks.

Nevertheless, there are reasons why it should seem inexpedient to dedicate such an enormous territory to one kind of culture. Prudence indeed should dictate a greater mixture of tillage land and sheepwalks, by which the sheepwalks themselves would be rendered more productive. Excellent as are the prospects for wool and for meat at present, we cannot say how long they will maintain their high value. It is true that the value of stock, especially sheep, is something enormous; still, judging from the low amount of the rental, it does not appear that as a whole the landowners derive an amount of benefit at all commensurate with the boundless extent of land in their possession. Moreover, if it be a fact that side by side with the inferior land there is a good deal of excellent land capable of the best cultivation, why should it not be used? Nor should we undervalue the intimate relation of a large population to agricultural and national prosperity. As a general rule it is certain that the more deserted a country is, the less profitable it becomes to live in it. The nearness of a large town population always imparts an additional value to agricultural products. It would be of little use, in fact, to raise grain where there is no demand for it, and no market to send it to. If therefore we persist in a policy of displacement of the entire population, the property left behind will be depreciated. Nor should we ignore altogether the feeling of the people. Emigration may be to many the happiest deliverance from a position of difficulty and a life of suffering. And though the emigrant may leave his native soil, his friends and associates, with bitter tears and wailings, he has at least the prospect of opening for himself a future infinitely more promising and cheering in the boundless regions of Canada, the United States, and Australia. Still it is a severe trial to part with country and kindred, under moral compulsion, with the prospect of great dangers before and of absolute starvation behind. And moreover, it is only the young and the vigorous that can advantageously emigrate; and what is to become of the old and infirm?*

* In the Appendix to the "Seventh Report of the General Board of Commissioners in Lunacy for Scotland," published in 1865, Dr. Mitchell reports as follows: "When the Highlanders leave home for America, Australia, or New Zealand, as the rule only the strong and sound go. Such of their relatives or dependants as are aged, infirm, imbecile, idiotic, deaf, blind, or cripple, are left at home. This is not always so, but it is *as the rule*. Many leave with the intention of sending for their unfortunate relatives as soon as they attain positions of

Are they to be driven away? As Mr. Sismondi pathetically said, "Is a man to be taught first of all to place an infinite value on the "possession of his bit of land, to devote year after year of his "thoughts and manhood to its cultivation, merely to learn that in "his decline—in the evening of his life—he is to be driven forth "into exile? Are the affections, the feelings, the habits of those "who have struggled so hard to extract a competence from an "ungrateful vocation for the best and most active portion of a life "to be overlooked? Is the scorning of those ties without danger? "Is the bitter disappointment of numbers, deprived alike of past "comfort, of present possessions, and of future hope, a contingency "which a statesman should contemplate with complacent optimism?" Let us remember that the Highland cottager sees as many charms in the barren heath, the silent pine, the solitary glen, the wild crag, and the stupendous rock, as the royal tenant beholds in the peopled terraces, the galaxy of beauty, the monuments of art, and the towers of Windsor.

> "Dear is that shed to which his soul conforms,
> And dear that hill which lifts him to the storm;
> And as a child, when scaring sounds molest,
> Clings close and closer to the mother's breast;
> So the loud torrent and the whirlwind's roar
> But bind him to his native mountains more."
>
> GOLDSMITH, *The Traveller*.

Whilst, therefore, we must give due attention to the physical conformation of the country, the inferiority of the soil, the uncertainty of the crops, and the advantages of pasture land, we should not forget the great evil attending the want of population and the condition and feeling of the people. Difficult indeed it is, under such circumstances, to suggest any specific course likely to produce any decided benefit. It seems almost useless to suggest any amendment of the law of entail and primogeniture. Yet the number of proprietors is far too small in proportion to the extent of territory.

"comfort and stability; but good intentions are proverbially weak, and besides, "the emigrant's life is often for years a very unsettled one, and full of hardships "and troubles, so that the affectionate leave taking too frequently and too naturally "ends in forgetfulness, indifference, and lasting desertion. Emigration, therefore, "leads to an accumulation of the defective in the districts from which it is taking "place; and the sum of these cannot be said properly to belong to the population "among whom they are found. In dealing with the distribution and amount "of insanity in Scotland, this consideration should not be lost sight of. Many "serious points of political and social economy arise out of it, but these it is not "my province here to discuss. It appears clear that there ought to be an accumu-"lation of defects of all kinds in any district from which there is a constant "exodus of the sound in mind and body. I have had opportunities of convincing "myself that what should be true, is true in fact. In the counties of Inverness, "Argyll, Ross, and Sutherland, emigration does actually influence the amount and "form of insanity which occurs in them."

Were the proprietorship more divided, there might be greater superintendence and care exercised, and probably the land would, on the whole, be more advantageously appropriated. In any case, if there be difficulties to the transfer of land, they should be removed. Should any quantity of land be left unused through encumberances, probably the establishment of such a court as the Encumbered Estates Court in Ireland might prove most advantageous. Then, again, it appears evident that the land now under tillage is let out into far too small holdings. Care, therefore, should be taken to seize the opportunities for enlarging them, not however, by forced clearances, but in cases of deaths or removals. Whilst it would be idle to go against nature, in forcing the production of grain from a reluctant soil, it is not the case that the soil and climate are so uniformly opposed to tillage as to discourage it. The agricultural statistics show that the productiveness of such portions as are under tillage in the Highland counties, is quite as great as that of land in any other county. And, from all we can gather, the process of conversion of tillage land into sheepwalks has reached its maximum. Maintain, therefore, the present or even greater quantity of land under tillage, but let the occupiers be put into a favourable position for improving the land. Let the crofters or small farmers have leases of their land; and pay a little attention to their homes and general comforts. The present difficulty is how to remedy the evils attending the over population of certain localities; and for this purpose we see no other mode than the improvement of communication with the interior, and the affording of greater facilities for settling in other places *at home*. Emigration to the colonies or foreign countries is not efficient, since it necessarily benefits only a few. What is wanted is to open up the land, and to encourage new industries in the interior; which will speedily create towns and villages, and afford better remuneration for the labour of the people. Everything, therefore, that can be done in the formation and improvement of roads and bridges and canals, and any other means of communication, should certainly be attempted.

XI.—*Pauperism.*

It might be supposed that the privations and sufferings of so many years should have produced a depressing influence on the physical and moral condition of the people. But it is not so. Owing to that independence of character and national manliness which distinguish the Scotch generally, and especially the Highlanders, poor relief has never found much favour among them. There is, moreover, in the Highlands a much less number of vagrants and casual poor than are generally found in wealthy and populous towns. Hence it is that, as it appears from the nineteenth report of the

Board of Supervision, the proportion of poor relieved in the Highland counties is actually less than the proportion relieved in all Scotland, and not materially different from the proportion usually relieved in England and Wales. The number of registered poor and their dependants, and of casual poor and their dependants relieved in the four Highland counties, in the year 1864, were as follows:—

Counties.	Population.	Number Relieved.	Per Cent.
Argyll	79,724	6,626	8·30
Inverness	88,888	5,570	6·26
Ross and Cromarty	81,406	5,232	6·43
Sutherland	25,246	1,450	5·73
	275,264	18,878	6·88 or 1 in 14½
Other counties of Scotland	2,787,000	237,817	8·57 „ 1 „ 12*
England and Wales	20,445,000	1,079,382	5·3 „ 1 „ 19

* In the "Thirteenth Report of the Board of Supervision for Relief of the "Poor (Scotland)," a comparison was made of poor relief in Scotland and in England, from which it appears that the ratio of paupers to population was in England 1 in 25·51, and in Scotland 1 in 24·18; but from that calculation all casual poor were excluded.

Very unfavourable comparisons have been made of the pauperism of the Highland counties of Scotland with Ireland, but the systems in operation in the two countries are totally opposed, in that the latter enforces in all cases the workhouse test, whereas both in England and Scotland, out-door relief is largely granted.

XII.—*Industries.*

The great want in the Highlands is a steady and regular employment. Two industries—the agricultural and fisheries—are the only resources at their command, but both are exceedingly uncertain, and often disappointing. Agriculture, we have already seen, gives but a scanty subsistence. The kelp industry, or the production of alkaline matter by the combustion of sea weeds, is gone since the abolition of duty on salt and on Spanish barilla. In times past the value of some farms in the Orkneys rose from 40*l.* to 300*l.* a-year in consequence of the abundance of such seaweeds, and it was even proposed to cultivate the weed by placing large stones within tide mark upon sandy shores, but all this is now quite gone. Some idea, however, may be formed of the amount of labour necessary to extract any benefit from seaweed, when we mention that 22 tons of wet seaweed are required to produce 1 ton of fair average drift kelp capable of yielding (besides iodine, bromine, and mixed residuary salts), about 5 to 6 cwts. of commercial chloride of potassium, and about 3 cwts. of

commercial sulphate of potassium.* The cod, ling, herring, and lobster fisheries give employment to a large number of persons, and are of great importance, but they last only for a certain time of the year. In 1864 there were cured in Scotland upwards of 600,000 barrels of herrings. The cod, ling, or hake fishery produced nearly 4,000,000 fishes. The number of boats employed was 13,300, of an aggregate tonnage of 189,000 tons, and the estimated value of boats, nets and lines, was 875,000*l.*, giving employment to nearly 100,000 persons. The great evil of these industries is their uncertainty. The occupation of the Highlanders differ materially from that of the inhabitants of other counties in Scotland. At the census of 1861, whilst in all Scotland 17·67 per cent. of the men were engaged in agriculture, in the four Highland counties the proportion was nearly 40 per cent; and whilst in all Scotland there were 32 per cent. employed in industrial occupations, in the Highland counties, the number so engaged was only 12 per cent. It is not that the people are idle. One who lives among them, and who has the most practical acquaintance with the islands, the Rev. Dr. Mackay, of Harris, depicted their habits and occupation as follows:—

"In the spring time the people have to labour to obtain manure "for their miserable crofts. Men and women have to go out to the "deep sea from week to week, and bring home boatloads of seaweed "shorn from the rocks for manure; and if that be not done, there is "no crop. That season continues till about the middle of May, for "they dare not sow their crops earlier. Certain parts of the coast "are appropriated to the people for the purpose of getting seaweed, "and men and women—*chiefly women, I blush to say it*—carry this "weed on their backs to their small crofts, at considerable distances "off very frequently. An amount of labour is thus performed such "as I do not see performed by the inhabitants of rural districts in "the lowlands. Then, after the seed is sown, the time comes for "cutting fuel. This depends a great deal on the weather, for the "peat has not only to be cut, but to be winded and dried. And "then comes fishing. Now-a-days it is herring fishing, and it con-"tinues about six weeks. No sooner is it finished than off the men "go to the east coast of Scotland, and remain there till about the "middle of September, at fishing, undergoing hardships in that "occupation that no other portion of British subjects are at all "accustomed to. Then come the harvest occupations, and after that "they have reaped their small crops, comes the duty of thatching "their houses, and of otherwise endeavouring to secure themselves "against the inclemency of the weather. In the winter we have

* See Dr. Hofmann's report on chemical and pharmaceutical products and processes in the International Exhibition, 1862, in the reports of the Juries, published by the Society of Arts.

"very frequent and heavy storms, which prevent their going to sea. "Then they occupy themselves in repairing their nets, in putting "together the equipments of their fishing boats. All this gives "them a good deal of work." When we charge the Highlanders with indolence, we should remember that habits of labour and industry are contracted or lost, just as the exercise of them is constant or uncertain. The Highlanders cannot be considered idle, so long as they fulfil what they are able to do, and what Providence assigns to them to do. Give them better opportunities; open up for them sources of labour and industry, and they will manifest the same energy of character as the Lowlanders, if not greater.

XIII.—*Marriages and Births.*

The Highlanders are charged with entering into improvident marriages. We do not find this charge borne out by facts. In the seventh, or last report on "Births, Deaths, and Marriages for "Scotland, for the Year, 1861," the number was given as follows:—

Counties.	Population.	Marriages.	Per Cent.
Argyll	79,724	351	0·44
Inverness	88,888	461	0·51
Ross and Cromarty	81,406	426	0·52
Sutherland	25,216	93	0·37
	275,264	1,331	0·48
Other counties of Scotland	2,786,655	19,565	0·70

It may indeed be the case that with the present straitened resources any increase of the population, in certain districts, only adds to the difficulty. What is wanted is new outlets for labour, and new sources of employment. Let these be found and we shall hear no more of the old lamentation that the population increases faster than the means of subsistence.

Nor is the state of morals very unsatisfactory; the number of illegitimate children being in fact considerably less than in all Scotland, and even less than in England. The proportion in 1864 was as follows:—

	Per Cent. of Illegitimate to the Total Births.
Argyll	6·1
Inverness	6·9
Ross and Cromarty	3·9
Sutherland	5·2
Average	5·6
Other counties of Scotland	9·55
England	6·3

XIV.—*Crime.*

And as to crime, there does not appear to be any material difference between these counties and the rest of Scotland. In the five years, 1860-64, the number of persons committed for trial or bailed in these counties, as given in the Tables of Criminal Offenders for the year 1864 (158 of 1865), was as follows:—

Counties.	Number of Persons Committed.	Average.	Percentage to Population.
Argyll	582	116	0·145
Inverness	703	140	0·151
Ross and Cromarty	275	55	0·006
Sutherland	46	9	0·184
	1,606	320	0·121
Other counties of Scotland	15,156	3,032	0·108

XV.—*Railways.*

A mighty innovator is, however, approaching the Highlands of Scotland—the railway. This great engine of activity and progress already penetrates some of the most sequestered quarters of the country, and is year by year making further inroad on the dreary solitude. Deeside is visited by railway. From Aberdeen the line goes now to Aboyne, and is soon to be extended to Braemar, passing the royal seat of Balmoral, and reaching nearly the foot of the mighty Lochnagar. What will become of the romantic ride along the Spittal of Glenshee, we cannot say. Another line passes charming Dunkeld, the wild Pass of Killiecrankie, romantic Blair Athol, and goes up to Inverness the fair capital of the north. Even far away westward, by the Caledonian Canal, a railway is about to be constructed, from Oban by the south side of Loch Etive, the north end of Loch Awe, Dalmally, Dunblane, and Callander. What wonders will these railways perform? They will enable the Highlanders to sell their timber to much greater advantage. Already contracts have been made with the railways, for years to come, for the transport of such material. They will impart additional value to the fisheries, by enabling them to send up the fish fresh from Skye to London. Meat and wool will likewise come up cheaper and quicker. Beyond this the railways will increase a hundredfold the number of visitors to those healthy and charming regions, and bring the Lowlanders and Highlanders more in contact with each other. They will probably bring to light new sources of wealth, as iron ore, coals, and mineral springs: they will create towns and villages there,

where the noise of the hammer never sounded, and the human voice itself was but rarely heard. They will accustom the Highlanders to new kinds of labour; and they will introduce among them a little of that pressure and hurry which forms the characteristic of modern civilization, there, where time was plentiful and punctuality of no moment.

XVI.—*Education.*

What is now wanted is the spread of a sound and liberal education. Hitherto the means of education in the Highland counties have been miserably deficient; whilst left isolated and forlorn, they had no means for providing themselves with schools and schoolmasters, and no one cared for them. Much is done, no doubt, by the parish schools, aided especially by the special grant of Her Majesty of 2,000*l.* for education in the Highlands; but had it not been for a ladies' society, founded in Edinburgh some years ago, for the religious improvement of the remote Highlands and Islands, and for the Gaelic School Society, both of which look mainly to the education of the people, it is impossible to say what would have been the moral condition of these distant regions at this time. Yet in vain have appeals been made to the Committee of Council on Education for some grants in favour of these districts. The reasons assigned for the refusal were, that the schools were not good, and the teachers uncertificated. But grants were wanted in order to get better schools, and to engage more efficient teachers. The condition of these schools, as described by the inspector, is, it must be confessed, deplorable. With an earthern floor, damp, and rarely more level than the ground on the outside; with a scanty furniture, and of the most primitive description, deal boards supported on stones, not unfrequently forming the benches, and a rude table the only desk; with a small supply of suitable books, and with scarcely any apparatus for teaching, what attraction can they afford? Then in most of these, the teacher remains at work only for a few months of the year, because the salary the Society can afford to give is not sufficient for the exclusive employment of any one; and the remainder of the time a substitute takes the place of the regular teacher, who makes no claim to any amount of learning or teaching faculty. Yet, notwithstanding all these deficiencies, these schools have been and are of immense benefit to the Islands, and are practically doing the very utmost to raise the population from the depth of ignorance and degradation. The present state of education in the Highlands and Islands of Scotland, may best be elicited from the number of persons who signed their marriage vows by marks. The seventh detailed "Annual Report of "the Registrar-General of Births, Deaths, and Marriages in Scot-"land," gives the following proportions:—

	Men.		Women.	
	Percentage who Signed by Mark.	Percentage who Signed their Names in Full.	Percentage who Signed by Mark.	Percentage who Signed in Full.
Argyll	16·23	83·77	26·49	73·51
Inverness	31·88	68·12	52·71	47·29
Ross and Cromarty	42·72	57·28	61·03	38·97
Sutherland	11·82	88·18	23·65	76·35
Average.....	29·80	70·20	46·43	53·57
Other counties of Scotland	9·30	90·70	19·67	80·33
England*	23·7	76·93	33·2	66·98

* "Twenty-fifth Annual Report of the Registrar-General of Births, Deaths "and Marriages in England."

Nothing could be of greater importance than to extend among the Highlanders the blessings of education. If no dependence can be placed upon a sufficient and regular supply of food, either from agriculture, fisheries, or any other industry, and emigration should become more and more an uncontrollable necessity, how important it is that the Highland youth should be early fitted for the struggle he is to encounter in the open market of the world. How important that he should be able to speak the Anglo-Saxon language, the only medium of communication in England, America, Australia, or New Zealand. The time is now past when the Highlander could place unlimited reliance on a military life; and even their athletic games and sports, their bagpipe and fancy kilts, the relics of former days, are only useful if they animate them to severer and more sober pursuits.

XVII.—*Conclusion.*

The future of the Highlands is, we trust, brighter than the past. Under the combined influence of a more humane and kinder consideration on the part of the landowners, a greater awakening among the people themselves to the claims of real life, the power of education and religion, and the civilising and spirit-giving activity of the railway, we hope soon to see that part of the country, once so full of life and chivalry, and withal so attractive and in many parts majestic, rise from the torpor of social decrepitude, and emit signs of new life and vigour. Their resources indeed are meagre, yet much may be made of them, and we are persuaded that the Highlander, physically strong and vigorous, active and bold, and who so often displayed in the field of battle a courage the most undaunted and a power of endurance seldom equalled, and still less excelled, will not

be satisfied in allowing these resources to lie dormant, and his fatherland to become the land of quadrupeds. We have full confidence that a people who have furnished men so distinguished in science and literature, in administration and command, in military and naval prowess, and above all, so tenacious in their love and admiration for their own fatherland, will speedily manifest a becoming energy in rescuing their country from its apparent decadence, and will be able, notwithstanding all obstacles, to raise her once more to a position of equality with the more fortunate portions of the sister isles.

APPENDIX.

Extract from Sir John McNeil's Report on the Western Highlands and Islands, 1851, pp. viii to x.

"The population of all of those districts consists principally of persons holding land directly from the proprietor. These tenants may be divided into three classes, of which the most numerous is that of '*crofters*,' including under that designation all persons holding land directly from the proprietor, at rents not exceeding 20*l.* a-year. In every district, the great majority of the population consists of crofters. The most considerable tenants are the '*tacksmen*,' persons having 'tacks,' or leases, who generally pay rents exceeding 50*l.* a-year, and some of them several hundreds a-year. Intermediate between the crofters and tacksmen, there is another class, paying rents of from 20*l.* to 50*l.*, who, not having leases, are not tacksmen, and not desiring to be classed with the crofters, call themselves '*tenants*.' Besides these three classes, who hold land directly from the proprietor, there is another class, called cottars, who are numerous in some parishes and districts, and who either do not hold land at all, or hold it only from year to year as sub-tenants. The part of the population not immediately or necessarily connected with the cultivation of land is small, and consists of proprietors, clergy, professional men, innkeepers, shopkeepers, and tradesmen. There are nowhere any manufactures, except a little knitting; and there have been none, except the manufacture of kelp, which has for some years been almost entirely abandoned. The crofters and cottars constitute the great mass of the population.

"The cottar, unless he be a tradesman, of which there are few, is altogether dependent on the wages of labour or the profits of fishing. Such as reside on the more considerable farms, and some who reside on crofts, are allowed by the tenants to cultivate patches of ground, chiefly for potatoes; and sometimes, but more rarely, they have grazing for one or even two cows, and a few sheep. Both the use of the ground and the grazing in such cases are generally paid for by a stated number of days' work, and are therefore merely wages paid in that form instead of in money. In some cases the cottar pays a money rent as sub-tenant of a patch of ground or of grazing for a cow; but the money to pay the rent must be earned. In short, he must be regarded as altogether dependent on the wages of labour in some places, and the profits of fishing in others.

"Until after the middle of the last century, the land appears to have been occupied exclusively by tacksmen, generally kinsmen or dependants of the proprietor, with sub-tenants, who held of the tacksmen, and by joint-tenants, who held farms in common, each having a stated share. About the time referred to, many of the farms held by tacksmen seem to have been taken directly from the proprietor by

joint-tenants. They grazed their stock upon the pasture in common, and cultivated the arable land in alternate ridges, or 'rigs,' distributed annually, and called 'run rig.' By this arrangement, each got a portion of the better and the worse land; but no one had two contiguous ridges, or the same ridge for two successive years, unless by accident. Since the commencement of the present century, the arable land has, in most cases, been divided into separate portions, of which one was assigned to each of the joint-tenants or crofters, the grazing, as formerly, remaining in common.

"This division of the arable land into separate crofts immediately caused, as might be expected, a great increase of produce; and districts which had formerly imported food annually, now produced enough to support the population, then comparatively small. But the change also led to evils which had not been foreseen. While the farms were held by joint-tenants, no one of them could subdivide even his own share without the consent of his partners, which was rarely obtained; but on the division of the arable land, the crofters, who had lived in hamlets or clusters of cottages, now generally established themselves separately on their crofts. Their houses, erected by themselves, are of stone and earth or clay. The only materials they purchase are the doors, and, in most cases, the rafters of the roof, on which are laid thin turf, covered with thatch. The crofter's furniture consists of some rude bedsteads, a table, some stools, chests, and a few cooking utensils. At one end of the house, often entering by the same door, is the byre for his cattle; at the other, the barn for his crop. His fuel is the peat he cuts in the neighbouring moss, of which an allotted portion is often attached to each croft. His capital consists of his cattle, his sheep, and, perhaps, one or more horses or ponies; of his crop, that is to feed him till next harvest, provide seed and winter provender for his animals; of his furniture, his implements, the rafters of his house, and generally a boat, or share of a boat, nets, or other fishing-gear, with some barrels of salt herrings, or bundles of dried cod or ling for winter use. Of fresh fish he can almost always command a supply, for in those districts there are few crofts that are far from the coast. While his croft supplied him with food and great part of his clothing, and his annual sales of cattle sufficed to pay his rent, he lived in a rude abundance, with little labour, and knew nothing of the unremitting daily toil by which labourers in other parts of the country gain their livelihood.

"When the lands of each farm were divided into separate crofts, a rent was fixed for each, varying according to the extent and quality of the arable land, the grazing being in common and of equal value to all. These rents have generally been determined by professional surveyors or valuators for a whole farm, and the amount distributed over the crofts it contains by the crofters themselves, in concert with the proprietor or his factor. In some cases the rent for each croft was fixed before its occupant was known, and the crofts at predetermined rents were distributed by lot. The rent of the croft, once fixed, remains unchanged, unless in the event of a general increase or reduction of all the rents on the property, or part of the property, in which it is situated; and in all cases that rent includes the hill-grazing which is almost always attached to it. Once established in his small farm, the crofter's name is entered on the rent-roll, and so long as he pays his rent, he does not expect to be removed, unless as a punishment for delinquency. On some of the old hereditary properties, the occupation of the croft has by custom become hereditary, the son, if in a condition to take a croft, succeeding to his father's as a matter of course; and this custom has generally been respected by persons who have recently acquired large properties where it was established. But where estates have been much divided, and especially where small properties have been purchased on speculation, or acquired by persons not previously acquainted with the custom, it has not been so generally regarded.

"As originally allotted, in the islands at least, the crofts appear to have been quite sufficient to afford the maintenance of a family and the means of paying the established rent; but when kelp was largely and profitably manufactured, when potatoes were extensively and successfully cultivated, when the fishings were good and the price of cattle high, the crofter found his croft more than sufficient for his

wants; and when a son or a daughter married, he divided it with the young couple, who built themselves another house upon it, lived upon the produce, and paid a part of the rent. Thus, many crofts which still stand in the rent-roll in the name of one occupant, who is held responsible for the whole rent, are, in fact, occupied by two, three, or even, in some cases, four families. On some properties an effort was made to prevent this subdivision. The erection of an additional house on any croft was prohibited, and the prohibition was enforced; but the evil was not thereby arrested. The married son or daughter was received into the house of the original occupant; and if the land was not actually divided, it was not the less required to support two or more families. Attempts were, in some cases, made to put an end to this practice, but it was found to involve so much apparent cruelty and injustice, and it was so revolting to the feelings of all concerned, that children should be expelled from the houses of their parents, that the evil was submitted to, and still continues to exist. The population was progressively increasing, and a large part of the increase was accumulated upon the crofts, in addition to the original occupants. Other circumstances contributed to the same result. The manufacture of kelp, which at one time brought to the proprietors in those districts a revenue equal to that derived from the land, gave employment to a great number of the inhabitants; but as that employment was for only six weeks or two months, and it was necessary to provide for the manufacturers the means of living during the whole year, small crofts were assigned to many persons in situations favourable for the manufacture, which were not alone sufficient to maintain a family, but which, with the wages of the manufacturer, were sufficient. When a change in the fiscal regulations destroyed this manufacture, the people engaged in it were thrown out of employment, and had they not been separated by habits and language from the majority of the population, they would no doubt gradually have dispersed and sought other occupations; but having little intercourse with other parts of the kingdom, which were to them a foreign country, they clung to their native soil after the manufacture in which they had been engaged was abandoned; and the crofts they occupied were then insufficient to afford them subsistence. Emigration took place from time to time, and somewhat retarded the increase of numbers; but the emigrants were the more prosperous of the 'tenants' and crofters, not the persons who had difficulty in finding subsistence at home,—and as the proprietors became uneasy at the amount of population accumulating on their properties, and their revenues were reduced by the destruction of the kelp manufacture, they became desirous to check the one and to increase the other. The lands vacated by emigration were let to tacksmen, who, profiting by the advantages of sheep farming, then first introduced on a large scale into those districts and being possessed of larger capital, were enabled to give a higher rent for the land than crofters could pay, at the same time that these rents were collected at less cost, with less trouble, and more certainty. These advantages led the proprietors to take every opportunity of converting lands held by crofters into large farms for tacksmen, and to establish fishing crofts, and crofts on waste land for such as, from failure to pay their rent, or because of the emigration of the other crofters on the same farm, or from other causes, it became desirable to remove to make room for tacksmen. The crofters who had replaced the original tacksmen, thus came in their turn to be replaced by another race of tacksmen."

Progress of the Population in the Highlands.

Progress of the Population in each Parish of the Four Highland Counties, 1801 *to* 1861; *Amount of Rental or Valuation of Land let, and Proportion of Rental per Head to the Population of* 1861.

ARGYLL.

Parishes.	1801.	1811.	1821.	1831.	1841.	1851.	1861.	Rental.	Rental per Head.
								£	£ s.
Ardnamurchan	4,829	5,151	5,422	5,669	5,581	5,446	4,700	14,087	2 19
Kilmallie	4,520	4,645	5,527	5,566	5,397	5,235	4,272	7,062	1 13
Inverary and Glenary	2,051	2,061	2,214	2,133	2,285	2,229	2,095	—	—
Kilmartin	1,501	1,453	1,452	1,475	1,233	1,144	949	4,965	5 4
Craignish	904	826	901	892	873	756	618	2,741	4 8
Kilmichael-Glassary	3,293	3,400	4,583	4,054	4,700	4,711	4,457	9,882	2 4
South Knapdale	1,716	1,720	1,913	2,137	2,223	2,178	2,519	4,878	1 18
North ,,	2,401	2,184	2,654	2,583	2,170	1,666	1,327	5,273	3 17
Kilchoman	2,050	3,131	3,966	4,822	4,505	4,142	3,436	—	—
Kilmeny	1,543	1,679	2,001	2,207	1,756	1,413	3,969	—	—
Bowmore or Kilardow	2,781	2,956	3,777	4,898	4,026	3,469			
Kildalton	1,990	2,269	2,427	3,065	3,315	3,310	2,956	—	—
Gigha and Cara	556	511	573	534	550	547	463	2,168	4 13
Killean and Killchenzie	2,520	2,934	3,306	2,866	2,402	2,219	1,890	11,320	5 19
Southend	1,825	1,869	2,004	2,120	1,594	1,406	1,274	10,280	8 15
Campbeltown	7,093	7,807	9,016	9,472	9,634	9,381	8,149	20,108	2 9
Saddel	799	819	859	926	846	791	1,277	5,219	4 1
Skipness	968	1,166	1,332	1,226	967	713			
Killcalmonell	2,952	2,265	2,511	2,495	2,460	2,170	2,302	8,523	3 13
Kilberry									
Kilfinan	1,432	1,382	1,839	2,004	1,816	1,695	1,891	5,815	3 1
Dunoon and Kilmun	1,750	2,130	2,177	2,416	4,211	4,518	5,461	9,172	1 13
Inverchaolain	626	552	651	596	699	474	424	3,088	7 5
Kilmodan	502	622	731	648	567	500	433	3,546	8 3
Strachlachlan and	433	440	502	450	464	397	872	5,263	6 —
Strachur	646	689	702	633	622	518			
Lochgoilhead and	680	604	694	585	573	446	702	6,397	9 —
Kilmorich	465	468	436	611	445	388			
Glenorchy	1,850	1,743	1,936	1,806	1,644	1,450	1,307	11,899	9 2
Ardchattan	1,478	1,415	1,663	1,650	1,461	1,525	1,381	12,423	5 18
Muckavin	893	873	831	770	960	788	729		
Kilmore	—	821	804	727	602	552	2,962	6,750	2 5
Kilbride	1,854	1,908	1,946	2,109	2,171	2,579			
Kilchrenan and	566	626	591	851	553	494	615	4,345	7 1
Dalavich	486	426	480	615	390	282			
Kilninver and	1,173	611	685	647	553	449	800	4,321	5 7
Kilmelford	—	372	401	425	343	265			
Kilbrandon and Kilchattan	2,278	2,327	2,644	2,833	2,602	2,375	1,859	5,251	2 16
Lismore and Appin	3,243	3,407	4,103	4,365	4,193	4,097	3,595	13,513	3 15
Torosay	1,764	2,114	2,288	1,889	1,616	1,361	1,380	6,887	5 —
Morvern	2,083	1,883	1,995	2,137	1,774	1,547	1,226	3,304	2 17
Kilninian and Kilmore	3,601	4,064	4,357	4,830	4,335	3,954	3,433	7,201	2 4
Kilfinichen	3,174	3,205	3,967	3,819	4,113	3,054	2,518	5,500	2 9
Tyree	5,163	5,419	5,445	5,769	5,833	4,818	3,998	4,757	1 3
Coll									
Small Isles	1,543	1,547	1,620	1,005	993	916	567	697	1 4

ARGYLL.—Extensive emigration has taken place from this county, which will account for the decrease of population in various parishes shown by the returns, especially in Ardnamurchan, Kilmartin, Craignish, Kilmeny, Killean Southend, Saddel, Kilfinan, Kilmodan, Strachlachlan, Lochgoilhead, Ardchattan, Kilmore, Torosay, Morvern, and Small Isles.

INVERNESS.

Parishes.	1801.	1811.	1821.	1831.	1841.	1851.	1861.	Rental.	Rental per Head.
								£	£ s.
Ardersier	1,041	1,287	1,387	1,268	1,219	1,241	1,042	1,736	1 13
Cawdor	1,179	1,091	1,120	1,184	1,150	1,202	1,239	3,543	2 16
Croy	1,601	1,456	1,538	1,664	1,684	1,777	1,873	3,802	2 1
Petty	1,585	1,615	1,758	1,826	1,749	1,784	1,671	6,598	3 18
Inverness	8,732	10,757	12,264	14,324	15,418	16,496	16,162	11,809	– 14
Dores	1,455	1,314	1,573	1,736	1,745	1,650	1,506	5,913	3 18
Daviot and Dunlichity	1,818	1,634	1,750	1,788	1,681	1,857	1,741	6,025	3 9
Moy and Delarossie	1,355	1,483	1,332	1,089	967	1,018	1,026	5,267	5 2
Duthel	1,578	1,613	1,739	1,895	1,769	1,788	1,928	3,415	1 15
Cromdale	2,187	2,010	2,897	3,234	3,561	3,990	3,943	4,279	1 2
Alvie	1,058	961	961	1,092	972	914	833	3,630	4 6
Kingussie and Insh	1,306	1,981	2,004	2,080	2,047	2,201	2,033	7,886	3 17
Boleskine and Abertarff	1,658	1,462	2,096	1,829	1,876	1,997	1,743	8,225	4 14
Laggan	1,333	1,254	1,234	1,196	1,201	1,223	986	8,204	8 6
Kilmonivaig	2,541	2,407	2,842	2,869	2,791	2,583	2,276	14,223	6 4
Urquhart and Glenmoriston	2,633	2,446	2,786	2,942	3,104	3,280	2,911	7,489	2 11
Kirkhill	1,582	1,477	1,572	1,715	1,829	1,730	1,757	6,917	3 19
Urray	2,083	2,649	2,731	2,668	2,716	2,621	2,355	8,592	3 12
Kilmorack	2,366	2,528	2,862	2,709	2,694	3,007	2,852	9,221	3 4
Kiltarlity	2,588	2,601	2,429	2,715	2,869	2,965	2,839	7,160	2 10
Glenelg	2,834	2,611	2,807	2,874	2,729	2,470	1,843	9,984	5 8
Sleat	1,903	1,936	2,608	2,957	2,706	2,531	2,330	2,968	1 5
Strath	1,748	2,107	2,619	2,962	3,150	3,243	2,664	3,392	1 5
Portree	2,246	2,729	3,174	3,441	3,574	3,557	3,159	3,325	1 7
Bracadale	1,865	1,869	2,103	1,769	1,824	1,597	1,335	5,096	3 16
Durnish	3,327	3,361	4,147	4,765	4,983	5,330	4,775	4,550	– 19
Snizort	2,144	2,275	2,789	3,487	3,220	3,101	2,639	4,063	1 10
Kilmuir	2,555	2,752	3,387	3,415	3,625	3,177	2,846	3,636	1 5
Harris	2,996	3,569	3,909	3,900	4,424	4,250	4,183	4,003	– 19
North Uist	3,010	3,863	4,971	4,603	4,428	3,918	3,959	4,155	1 –
South ,,	4,595	4,825	6,038	6,890	7,333	6,173	5,358	5,413	1 –
Barra Island	1,925	2,114	2,303	2,097	2,363	1,873	1,853	1,662	– 17

INVERNESS.—Extensive emigration has taken place from this county since 1841, which will account for the decrease of population in various parishes as shown by the returns, especially Ardersier, Petty, Daviot, Moy and Durossie, Kincardine, Alvie, Kingussie, Laggan, Kilmonivaig, Kirkhill, Glenelg, Sleat, Bracadale, Kilmuir, and North Uist. In some islands there was an increase attributed to the subdivision of farms.

ROSS AND CROMARTY.

	1801.	1811.	1821.	1831.	1841.	1851.	1861.	Rental.	Rental per Head.
								£	£ s.
Glenshiel	710	728	768	715	745	573	485	4,092	8 8
Kintail	1,038	1,058	1,027	1,240	1,168	1,009	890	4,381	4 17
Lochalsh	1,606	2,034	2,492	2,433	2,597	2,299	2,413	4,158	1 13
Locharron	1,178	1,485	1,932	2,136	1,960	1,612	1,592	2,980	1 17
Applecross	1,896	2,297	2,793	2,892	2,861	2,709	2,544	1,548	– 12
Gairloch	1,437	2,755	4,518	4,445	4,880	5,162	5,449	8,017	1 9
Lochbroom	3,533	3,754	4,540	4,615	4,799	4,813	4,862	8,713	1 15
Contin	1,944	1,844	1,930	2,023	1,770	1,562	1,509	11,952	7 18
Fodderty	1,789	1,900	1,952	2,232	2,437	2,342	2,247	7,216	3 4
Dingwall	1,418	1,500	2,031	2,124	2,100	2,364	2,412	—	—
Killiernan	1,131	1,390	1,371	1,479	1,643	1,794	1,494	5,079	3 7
Knockbain	1,859	1,766	1,973	2,139	2,565	3,005	2,485	6,950	2 16
Avoch	1,476	1,560	1,821	1,956	1,931	2,029	1,788	4,436	2 10
Rosemarkie	1,289	1,312	1,571	1,799	1,719	1,776	1,545	4,400	2 16
Urquhart and Logie	2,820	2,664	1,496	1,591	1,764	2,109	2,158	7,125	3 6
Kiltearn	1,525	1,552	1,454	1,605	1,436	1,538	1,634	6,606	4 –
Alness	1,072	1,038	1,270	1,437	1,269	1,240	1,178	5,060	4 5
Cromarty	2,208	2,413	2,649	2,901	2,662	2,727	2,300	—	—
Resolis	1,067	1,168	1,201	1,470	1,549	1,551	1,568	4,207	2 13
Rosskeen	2,074	2,390	2,581	2,916	3,222	3,699	3,766	8,931	2 7
Kilmuir Easter	1,703	1,559	1,381	1,551	1,486	1,437	1,295	4,464	3 9
Logie Easter	1,031	928	813	934	1,015	965	932	4,029	4 6
Nigg	1,443	1,349	1,436	1,404	1,426	1,457	1,253	4,974	3 17
Fearn	1,528	1,508	1,654	1,695	1,914	2,122	2,083	6,272	3 –
Tarbat	1,343	1,379	1,625	1,809	1,826	2,151	2,269	4,732	2 5
Tain	2,277	2,384	2,861	3,078	3,128	3,574	3,294	8,908	2 14
Edderton	899	846	915	1,023	975	890	836	2,803	3 7
Kincardine	1,865	1,666	1,811	1,887	2,108	1,896	1,746	2,803	1 6
Uig	2,086	2,500	2,875	3,041	3,316	3,209	2,878	2,956	1 –
Lochs	1,875	1,927	2,669	3,067	3,653	4,256	4,901	3,365	– 15
Barvas	2,233	2,165	2,568	3,011	3,850	4,189	4,609	2,127	– 9
Stornoway	2,974	3,500	4,119	5,422	6,218	8,057	8,668	3,478	– 7

Ross and Cromarty.—The decrease in different parishes in this county was attributed in the census report to emigration and enlargement of sheepfarms, especially in Glenshiel, Lochalsh, Contin, Avoch, Kiltearn, Alness, and Kilmuir Easter. The increase in other parishes was ascribed to the success of the herring fishery.

SUTHERLAND.

	1801.	1811.	1821.	1831.	1841.	1851.	1861.	Rental.	Rental per Head.
								£	£ s.
Criech	1,974	1,969	2,354	2,562	2,582	2,714	1,886	2,968	1 11
Assynt	2,395	2,479	2,803	3,161	3,178	2,989	3,178	4,226	1 6
Eddrachillis	1,253	1,147	1,229	1,965	1,699	1,576	1,641	3,785	2 5
Durness	1,208	1,155	1,004	1,153	1,109	1,152	1,109	3,793	3 8
Tongue	1,348	1,493	1,736	2,030	2,041	2,018	2,077	2,922	1 8
Lairg	1,209	1,354	1,094	1,045	913	1,162	961	3,050	3 3
Rogart	2,022	2,148	1,986	1,805	1,501	1,535	1,439	2,890	2 –
Dornoch	2,362	2,681	3,100	3,380	2,714	2,981	2,885	4,591	1 11
Golspie	1,616	1,391	1,036	1,149	1,214	1,529	1,625	2,333	1 8
Clyne	1,643	1,639	1,874	1,711	1,765	1,933	1,886	2,842	1 10
Loth	1,374	1,330	2,008	2,214	2,526	640	610	2,142	3 11
Kildonan	1,440	1,574	565	257	256	2,288	2,132	6,215	2 18
Farr	2,408	2,408	1,994	2,073	2,217	2,203	2,103	5,032	2 8
Reay	865	861	1,057	1,013	1,067	1,073	2,476	—	—

Sutherland.—The decrease of population in Eddrachillis, Durness, Tongue, Lairg, Rogart, Dornoch, Golspie, Kildonan, and Farr, was ascribed to the removal of small tenants and the establishment of sheepfarms.

MISCELLANEA.

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I.—*Mortality at Different Stages of Life.*

A VOLUME of great interest and importance has been recently issued by the Registrar-General as a Supplement to his Twenty-fifth Annual Report. It exhibits for each district of England and Wales, the average annual rate of mortality of males and females at various ages, as well as the causes of death, for the ten years ended with 1860. The work is very elaborate; the tabular matter exceeds several hundred closely-printed pages, and is preceded by a comprehensive survey of the facts from the pen of Dr. Farr. From this part of the report the following observations upon mortality at different periods of life has been taken:—

"*The Mortality of Infants.*

"As there are difficulties in determining the ages of the oldest people in the population, so there are great difficulties in determining the rate of mortality among infants, from the want of exactly observed facts. The infants in the first year of life are to some extent mixed up with infants in the second year of age; and their numbers fluctuate from year to year, owing to fluctuations in the births, and the mortality from zymotic and other diseases, so that the years of infant life cannot be accurately deduced from decennial enumerations of the infants living at the date of the census. Again, the mortality diminishes so rapidly after the date of birth, and at such various rates under different conditions, that it is necessary to subdivide the first year into months, and even days, to get results exactly comparable. The still-born children in England are not registered; and a certain number of infants that breathe for a short time are, it is believed, to save the burial fees, interred as the still-born are buried, and so escape registration. Upon the other hand, the deaths of premature children born alive are registered; and they amounted to 45,814 out of 626,340 deaths of infants under 1 year of age in the six years (1858-63) that they have been distinguished from infants dying of debility (see Table I).* The recognized proportion is 7·315 per cent., so that to obtain the rate of mortality among children *born at*

* The tables alluded to will be found in the original report.

the full term of *nine months*, the premature children, if we had the means, should be struck out of the account both of the living and dying. This is impossible in the present state of statistical observation. But it happens that these deaths of premature children serve as probably more than a sufficient set-off against the infants of full term dying soon and escaping registration.

"The age of man is reckoned from the date of birth; but before that date the fœtus has lived its intra-uterine life, and the instant in which the sperm-cell and germ-cell intermingle is the true time of the embryo's origin. Respecting the rate of embryonic mortality there is little definite information; but it is probable that as the mortality in the first year of breathing life rapidly increases as we proceed backwards from the twelfth to the third, second, and first month, the same law prevails during embryonic life, until we arrive at the destruction of an immense proportion of the spermatozoa and ova which are provided to secure the continuation of the species. This question well deserves the attention of the Obstetric Society, and is intimately connected with abortions, miscarriages, and still-births.*

"The annexed table (Table II) from the English life table shows the estimated numbers of males and females surviving each month, and the annual rates of mortality in each month. It will be observed that the rate of mortality rapidly declines month by month; and that the mortality of boys in every month exceeds that of girls, so that at the end of the first year the number of boys does not greatly exceed the number of girls.

"The mortality of infants in France was such in the first year as to reduce 1,000,000 to 820,065, according to the experience acquired by following the births in 1856-60 for the twelve months following. The deaths were 179,935, and the probability of dying 0·179935.

"The French returns show the deaths in the first week of life; and by the returns of 1856 the mortality was at the rate of 154 per cent. per annum in the first seven days, 120 in the second seven days, and 54 in the sixteen days following. The mean births were 927,226; the deaths in the three periods were 27,002, 20,517, and 20,618, making 68,137 deaths in the first month of life. So out of 1,000,000 births 29,121 die in the first week, 22,128 in the second week, and 22,236 in the sixteen days following.

"In England and Wales the deaths of 2,374,379 infants in the first year of age were registered in the twenty-six years 1838-63; and of the number 1,329,287 were boys, 1,045,092 were girls.

"996,630 deaths at the same age were registered in the ten years

* "Dr. Granville has the merit of having called attention to the importance of the subject. In his *Report of the Practice of Midwifery at the Westminster General Dispensary*, for 1818, he showed that of 400 pregnant married women who applied at the dispensary 128 had miscarried within the previous ten years one time or more; in all 305 times. The 128 women had given birth during the same term of years to 556 live children, 305 dead embryos. 272 of the women had not miscarried at all; and Dr. Granville does not say to how many living children they had given birth. Of the 305 miscarriages, 185 occurred in the first 3 months of pregnancy, 55 in 3—6 months, and 55 in 6—8 months. (pp. 39—48.)"

1851-60; of boys 557,213, and of girls 439,417. Nearly 100,000 infants died annually; in the proportion of about 56 boys to 44 girls.

"*Causes of Death in Infancy: Age* 0—1.

"The causes of death are necessarily obscure. The small organs are not fully developed, and the functions are often not easily explored. Of the subjective symptoms no information is supplied by the little patient.

"When the zymotic diseases are fully developed they are distinguishable in infants. The table (pp. 2 and 3) shows the number of deaths from the various species. Whooping-cough was fatal in infancy; but the bowel complaints were nearly three times as fatal as whooping-cough. Thus in the ten years 5,027 boys and 4,114 girls died annually of diarrhœa, dysentery, or cholera. From all zymotic diseases 11,442 boys and 9,956 girls died annually. Of scrofula, phthisis, and hydrocephalus 3,547 boys and 2,723 girls died annually.

"The convulsive diseases and other affections of the brain and spinal chord were fatal to 12,448 boys and 9,171 girls of the first year of age annually. The diseases of the lungs were less fatal. 607 of the boys and 532 of the girls died by accidental or other violence yearly.

"Nothing is known in our statistics about the still-born, as they are not at present registered, on the ground that it is difficult to distinguish them from abortions and miscarriages. But the difficulties are not insuperable; and in many ways the facilities of burying still-born children unregistered throw open the gate of temptation to crime.

"*Children under Five Years of Age:* 0—5.

"*Note.*—The rates in the text show the deaths to 100 living, unless another basis is indicated.

"By the English life table, the mortality, it will be seen, decreases rapidly after the first year of life. The annual mortality of males per cent. in each of the first 5 years of age is 18·326, 6·680, 3·624, 2·416, and 1·799; of females 14·749, 6·436, 3·603, 2·450, and 1·785.

"The mortality of males, by the life table, under 5 years of age is 7·014, of females 6·125. During the ten years, 1851-60, the mortality of males of ages (0—5) in somewhat different proportions was 7·243 per cent., of females 6·274 per cent. The proportions of first and second year's children are higher in the increasing population than they are in the life table.

"When the mortality by each cause is treated of, we may take, to avoid fractions, 1,000,000 males living a year for basis; then to that number the annual deaths of zymotic diseases were by small-pox 1,047, typhus, typhia, and typhinia inclusive, 1,401, measles 2,847, whooping-cough 3,246, scarlatina 4,311, diphtheria 431, cholera, diarrhœa, and dysentery 5,625; making, with others, 22,420 deaths out of 1,000,000 boys by all zymotic diseases, against 21,772 out of

the same number of girls. Whooping-cough was more fatal to girls than it was to boys, in the proportion of 4,003 girls to 3,246 boys; so was typhus or typhia; all the other zymotics were more fatal to boys than to girls.

"Cancer was fatal to few children; and the deaths were probably from soft cancer (fungus hæmatodes). There were many deaths from scrofula and phthisis. Hydrocephalus killed boys in the proportion of 2,915 to 2,162 girls; other diseases of the brain in the proportion of 12,169 boys to 9,479 girls. These brain diseases constitute a sixth part of the mortality of the young boys, and between one-sixth and one-seventh of the mortality of girls.

"Convulsions in infancy is the capital head under which these affections accumulate. Like diarrhœa, convulsion is the result of teething, local irritations, poisons, zymotic action in the early stage, before the development of its characteristic symptoms. The nerve-force is thrown into motion by a great variety of causes; and the convulsion of the muscles is so striking a symptom that it overwhelms all others, some even more dangerous in their essence.

"The heart and lungs—the great seats of the circulatory and respiratory systems—are intimately connected. Death ensues when the heart does not beat. The stoppage of the breath, or anything to prevent the access of oxygen and the expulsion of carbonic acid is fatal. Thus from the affections of the respiratory system we have a mortality of 11,296 boys and 9,499 girls per million. The lung and the brain diseases of girls are equally fatal.

"The diseases of the digestive organs produced a mortality of 1,470 boys and 1,121 girls.

"The maladies of the urinary organs, of the organs of generation, of the joints (excluding scrofula), and skin, are rarely fatal in childhood.

"The violent deaths are nearly as fatal as the idiopathic diseases of the digestive organs, for 1,451 boys 1,138 girls per million living died annually by violence.

"Under other causes are included premature births, atrophy, and debility, malformations, teething, as well as cases in which the causes are unspecified. There are 16,579 annual deaths to a million boys, and 13,885 deaths to a million girls, from a group of causes, including malformations, premature birth, atrophy, debility, and other ill-defined developmental diseases.

"*Mortality of Children* (0—5) *in different districts.*

"Death in childhood is an unnatural event, inasmuch as the regular series of development of the human structure from the germ-cell to the perfect man in his prime, and in his last declining stage of existence, is interrupted. But life at all ages depends upon so many conditions, and is exposed to so many risks, that out of given numbers living some die at every age, and we can only take for a practical standard the lowest authenticated rates of mortality.

"Thus, in the sixty-three healthy districts of England, the annual mortality of boys under 5 years of age was at the rate of 4·348, and of girls 3·720 per cent.; the mean being 4·034.

"*Twenty-eight* districts have been selected, showing the low

annual rate of mortality 3·348 for the mean of the rates of the two sexes: the boys dying at the rate 3·576, the girls at the rate 3·120.

"The twenty-eight districts are found in all the regions of England and Wales, from the northern limits of Northumberland to the New Forest on the Southampton waters.

"The mortality was at the annual rate of 2·317 in Bellingham; 2·593 for boys, 2·040 for girls. This rate is slightly exceeded in the adjoining district of Rothbury, also on the border of Northumberland; and in Bootle, north of the Duddon, on the coast of Cumberland.

"The mortality among the families of the British peerage has been investigated with much care and ability by Mr. A. H. Bailey and Mr. A. Day.* They confined their investigation to the peers, the children of peers, and the children of the eldest sons of peers living in the present century. The numbers existing on 31st December, 1855, were 4,282; 2,283 males, and 1,999 females.

"The mortality of peers' children under 5 years of age was at the rate of 2·069 per cent.; among boys under 5 years of age 2·227, girls 1·882.

"The number of facts for the peerage is small; as the deaths of boys were 274, of girls 196; or 470 in the aggregate. For Bellingham the deaths of boys in ten years were only 112, of girls 82; 194 in the aggregate. The districts of the lowest mortality are very thinly peopled, but there is no reason to suspect that any of the deaths are unregistered. And the mortality only proceeds gradually step by step up to 3·500 in many other districts.

"Dr. Joseph John Fox, in a valuable paper on the vital statistics of the Society of Friends, found that by the returns in the *Annual Monitor*, the mortality under 5 years of age, in 1842-52, was at the rate for boys of 3·190, of girls 2·383.† This mortality differs little from the mortality of the peerage. Another return makes the mortality of the boys of Friends 5·598, of the girls 4·733.

"The mortality of 1,087 children of the clergy has been investigated by the Rev. John Hodgson, M.A., who procured returns in 1829 and 1858 from the parents; the mortality of the boys was at the rate of 3·729, of the girls at the rate of 2·302, in the years under observation; making the mean mortality of the sexes 3·027.‡

"Very different are the rates of mortality among children in 151 districts; where the lowest mortality among boys is at the rate of 7·084, and the highest at the rate of 13·741 per cent. annually. The mean mortality of the districts was, for boys 8·593, for girls 7·432, for both sexes 8·013.

"These mean rates are obtained by adding up the district rates, and dividing by the number of districts.

"The population of children in the 151 districts was 1,391,420 in 1861; and the annual deaths at the rate (3·348) of twenty-eight

* "*Assurance Magazine*, vol. ix, pp. 305—326.

† "*Journal of the Statistical Society*, vol. xxii, pp. 219, 220. Dr. Fox says this rate 'is obviously much to low,' and on that ground suspects that the returns are defective.

‡ "*Observations on the Duration of Life Among the Clergy*, by the Rev. John Hodgson, M.A., Table IV, p. 36.

healthy districts (Table VIII) would be 46,585; while at the mean rate (8·013) it would be 111,494. Thus there is an annual sacrifice of about 64,909 children's lives by various causes in 151 districts of the kingdom.

"The mean annual mortality of children under 5 years of age was 10·022 per cent. in Sheffield, 10·149 in East London (City), 10·203 in Coventry, 10·219 in Nottingham, 10·246 in Whitechapel, 10·277 in Leeds, 10·480 in Wolverhampton, 10·852 in St. Giles (London), 11,725 in Manchester district, and 13·198 in Liverpool district.

"There is no doubt great negligence on the part of the parents, great ignorance of the conditions on which health depends, and great privation among the masses of the poor, but there is no reason to suspect that any great number of the infants of these districts fall victims to deliberate crime; yet the children of the idolatrous tribe who passed them through the fire to Moloch, scarcely incurred more danger than is incurred by the children born in several districts of our large cities.

"A strict investigation of all the circumstances of these children's lives might lead to important discoveries, and may suggest remedies for evils of which it is difficult to exaggerate the magnitude.

"The weaklier lives, it is said, are, under this state of things, cut off; but it must also be borne in mind that many of the strongest children are wounded and are left weakly for life.

"*Childhood: Age* 5 *and under* 10 *Years:* 5—10.

"The child is at this age able to walk and to talk; his forces are greater, and his hold on life is firmer than it was. The rate of mortality declines with every year of age; and during the period of the ten years, 1851-60, it was at the rate per cent of ·851 for males, ·842 for females. The mean rate of mortality for the twenty-five years, 1838-62, was ·883 and ·876; so that in the years 1851-60 there is a reduction in the rate of mortality per cent. of boys ·032 and of girls ·034.

"Zymotic diseases cause more than half (·451 boys and ·478 girls per cent.) of the mortality at this stage of childhood; and of the zymotic diseases, scarlatina and fever (typhus, typhia, and typhinia, including typhoid and infantile intermittent fever), were much the most fatal. The mortality from scarlatina is less by half than it was in the previous age, but it remains much more fatal than small-pox, measles, whooping-cough, diarrhœa, and other maladies of this class. Diphtheria, which has now taken its place among the fatal diseases of England, in this respect resembles scarlatina.

"Scrofula, tabes, phthisis, hydrocephalus, and diseases of the brain contribute largely to the mortality of this age; so do diseases of the lungs.

"In 163 districts the rate of mortality in both males and females was less than ·700; among boys it was ·388 in the district of Shipston-on-Stour, and ·398 in Bedale, ·435 in Cranbrook, ·492 in Sevenoaks, ·414 in Petworth, ·489 in South Stoneham, ·441 in Andover, ·411 in Ware, ·498 in Royston, ·470 in Henley, ·474 in

Brixworth, ·499 in Shaftesbury, ·458 in the Scilly Islands, ·495 in Ludlow, ·483 in Martley, ·474 in Pershore, ·414 in Billesdon, ·476 in Leyburn, ·453 in Askrigg, ·446 in Reeth, ·469 in Bellingham, ·434 in Presteigne.

"Among girls the lowest rates of mortality were recorded in the Scilly Islands ·299, Billesdon ·396, and Reeth ·348.

"Very different rates of mortality prevailed in thirty-one districts, where the mortality of males and females exceeded 1·000 per cent.: the mortality of boys was 1·256 in Bristol, 1·277 in Manchester, 1·311 in Merthyr Tydfil, 1.367 in St. James', Westminster, 1·391 in St. Giles (London), and 1·457 in Liverpool. The mortality of females in the same districts was 1·014, 1·220, 1·314, 1·065, 1·083, and 1·433. To boys and girls of this age the Liverpool district was the most fatal.

"*Boyhood: Age* 10—15 *Years.*

"This is the age of puberty; and the mortality decreasing from birth is at its lowest rate about the middle of the period; among boys the mortality in the 10 years was at the rate of ·488, among girls at the rate of ·506 per cent. Among 1,000 boys, less than 5 die every year. As boys actually ill are not sent to public schools, an average of 1 death in 200 boys there would imply an exceptionally high rate of mortality.

"The deaths of boys arise chiefly from injuries under the class of violence ·077, from consumption ·076, from fever ·069, and from scarlatina ·046.

"Girls die much less frequently of violence, including burns, than boys; their mortality from this class of causes is only ·016. Upon the other hand, they suffer much more than boys from consumption; which at this early age shows its predeliction for their sex. How much organization, in-door life, and compression of the chest, interfering with the free action of the breathing organs, have to do with the excess of consumption in girls, it is difficult to say.

"Of the salutary effects of free breathing in the open air there can be no doubt, and if they are studied, it is probable that among them will be found the reduction of the mortality by consumption from ·129 to a figure nearer that of boys, ·076, which is still much higher than it ought to be.

"Fever, scarlatina, and diphtheria are more fatal to girls than boys.

"The mortality of boys of the age of 10—15 in all England is ·488; but there are ninety-five districts in which the mortality is below ·350; in the Stockbridge district their mortality was at the rate of ·198; in Catherington ·144; in Penrith ·220; in Easingwold and in Bedale ·215.

"In Merthyr Tydfil the mortality of the boys was 1·089; at this age it is the highest rate in England. Sedbergh ·936, Abergavenny ·877, and Leek ·861 stand next on the list. The mortality exceeds ·700 in Macclesfield, Congleton, Wigan, Auckland, Easington, Houghton-le-Spring, Chester-le-Street, Neath, Llanelly, Aberayron, and Festiniog.

"Occupation, at this age, plays a part in the mortality; and in the mining districts many of the boys are killed under ground.

"*Youth: Age* 15—20 *and* 20—25.

"Growth continues through the whole of these ages; and the body attains its full strength at 25, which is near the average age of first marriage in England.

"Men are now exposed to the full influence of their occupation; but the effect is sometimes only developed later in life, as is the case in respect to Cornish miners.

"The mortality after the age of 15 increases; thus proving that the vital tenacity of men is not proportional to their growth, size, vigour, or intelligence.

"The mortality at the age 15—20 in all England is at the rate of ·669 per cent. for men, and ·738 for women; at the age of 20—25 the mortality is ·883 for men, and ·853 for women.

"The zymotic diseases, which are exceedingly infectious, and occur only once in life, such as measles and whooping-cough, have generally been undergone before the age of 20. Scarlatina and diphtheria also subside as the persons remaining unaffected diminish. Small-pox is, however, more fatal at the age 20—25 than it was at 10—15, implying, perhaps, that vaccination was not so common twenty years as it was fifteen years ago, rather than any diminution in the efficacy of vaccination as age advances. Fever is the most fatal zymotic disease at these ages; that it is more fatal than it is at the age 25—35, is due probably to the exposure of immigrants in the towns to the various forms of typhine, and to their subsequent comparative immunity from its effects. The mortality from fever of men of the two ages was ·086 and ·085; of women ·103 and ·078. Young girls are more exposed than young men to the sources of typhoid fever, which Dr. Murchison has aptly designated pythogenic fever. The mortality by violent deaths was ·086 and ·095 among men of these two ages; and only ·016 and ·013 among women. But one cause of death at these ages is peculiar to women; the mortality from childbirth, including metria, or the fever of that name, is ·014 and ·061. These deaths thrown in do not compensate for the excess of deaths by violence among men; but phthisis is so much more prevalent among young women than it is among young men, that it more than compensates at 15—20 for the excessive deaths by violence among young men. The mortality by phthisis at the two ages was ·240 and ·406 for men, ·352 and ·429 for women. Half the deaths of young women at these ages are by consumption.

"The mortality of males at the age 15—20 is lower than ·400 per cent. from all causes in thirty districts of the country, and exceeds ·800 in eighty-five districts. The mortality of districts is swollen at this age and the age following by deaths in hospitals, to which unmarried men often resort in great numbers. Several Welsh and other rural districts also figure here.

"The mortality of males from all causes at the age 20—25 is below ·500 per cent. in twelve districts; and above 1·200 in forty-two districts.

"*Reproductive Age:* 25—35.

"At this age 67 in 100 of the men are husbands and 67 in 100 of the women of England are wives, or 2 in 3; and a considerable proportion of them are parents. By early death 2 of 100 men are left widowers and 3 of 100 women are widows.

"The mortality of men at this age is ·957 per cent., of women ·992 per cent. Fever is the chief zymotic disease; ·067 for men and ·063 for women; but the mortality by diarrhœa, dysentery, and cholera is growing greater; it is ·024 for men and ·027 for women. Phthisis is the great preponderating malady; the mortality by it was ·403 for men and ·458 for women. By violence the rate was ·100 for men, ·013 for women; but at this age childbirth induces a mortality of ·089; thus making the mortality under these two heads greater than the mortality of men by violence.

"The diseases of the brain, of the heart, and of all the important organs begin to grow more fatal; but the organs give way much more frequently at later ages.

"In thirty-three districts the mortality of men was at rates below ·650 per cent.; in Kettering the mortality was ·508, Thrapstone ·597, Evesham ·557, Pershore ·597, Billesdon ·573, Bourn ·545, Gainsborough ·579, Wetherby ·588, Tadcaster ·538, Pocklington ·562, Reeth ·569, Easington ·581, Longtown ·596.

"The mortality exceeded the rate of 1·500 per cent. in eleven districts; it was 1·995 in Gravesend, 1·719 in the Scilly Islands, 1·547 in Aberayron, and 1·596 in Liverpool. The high mortality 2·010 in Barnet is due to a lunatic asylum; in Alverstoke, East Stonehouse, and the Medway, to hospitals.

"*Manhood: Age* 35—45.

"A large proportion of the men and women of this age are settled, are married, and have children. Their occupations for life are fixed, and the effects of workshops on health and disease are sometimes perceptible.

"The mortality of men is at the rate of 1·248 per cent. The mortality by fever, ·065, is lower than it is at any other age, as the number of susceptible persons has diminished, and the diminution is not yet counteracted by the high rate of mortality from advancing age among those attacked. Cholera, diarrhœa, and dysentery ·032 and other zymotic diseases (·052) are fatal to some extent; but by all zymotic diseases the mortality is ·160. Consumption is still the great fatal disease ·400; as to it a third of the deaths are referable. But the brain, heart, lungs, stomach, and kidneys show signs of wear; and the mortality from all the classes of monorganic diseases is double that of the previous period. Violent deaths kill at the rate of ·115; as like accidents grow more fatal.

"The mortality of females 1·215 is not quite at so high a rate as the mortality of males; either in the class of zymotics, or in the brain, lung, and kidney diseases. The mortality by violence is only ·018 among females, against ·115 among males; but this is nearly counterbalanced by the deaths of women from childbirth ·090, and ovarian dropsy ·021. Cancer, a terrible disease developing with

years, now makes an impression in the catalogue of women's diseases; its mortality is for men ·018, for women ·059 per cent.

"While the mortality of men in England was at the rate of 1·248 per cent., there were seventy-one districts in which the rate of mortality was below ·800, The rate was ·507 in Holsworthy, ·516 in Market Bosworth, and ·539 in Longtown.

"The mortality exceeded 1·800 per cent. in twenty-five districts; nearly all of them in large towns, and nearly all of them containing large hospitals or large lunatic asylums, where many patients die at these ages, and at the three ages following.

"The mortality of men in London, for example, at this age is 1·629 per cent.; and ·303 of that mortality, little less than a fifth of the whole, takes place in the great hospitals. The mortality of London women at the same age is only 1·281; and only ·127 per cent. of them die in the hospitals.

"*Manhood: Age* 45—55.

"At this age the intellect is developed and athletic power declines; the reproductive age in women is nearly over.

"The mortality of men was at the rate of 1·796 per cent.; to which zymotic diseases, chiefly fever and cholera, contributed ·207; phthisis ·383; the chief increase arising under the heads of mon-organic diseases of brain, heart, lungs, stomach, and kidneys, covering ·912 of the mortality. By violent deaths ·137 died.

"Women, except a few, have past the child-bearing age; and the mortality from this cause is inconsiderable. From all causes it is 1·520 per cent.; comprising from consumption ·312, that of males being ·383; of brain and nerve diseases ·199 men and ·168 women die; of heart diseases and dropsy ·190 men and ·206 women; of diseases of lungs ·309 men and ·206 women. It is probable that the excessive mortality of men at this age—such as miners—is from the bad air and dust which they breathe at work. The diseases of the urinary organs are more fatal to men; those of the generative organs, including ovarian dropsy, to women. Of cancer, the mortality is ·042 for men and ·128 for women.

"A considerable portion of the higher mortality of men is due to the excess in their deaths by violence; by which the mortality is ·137 for men and ·027 for women.

"While the mortality of men in England is 1·796, there are twenty-three of its districts in which the rate of mortality is below 1·000; in Ringwood it is ·791, Holsworthy ·783, Caxton ·894, St. Faith's (Norwich) ·821, Malmesbury ·889, Winchcomb ·890, Billesdon ·828, Leyburn ·886, and Rhayader ·890.

"Upon the other hand, in twenty-six districts the annual mortality of men exceed 2·600 per cent. Fifteen of the districts are in London; and the following five contain neither hospital nor lunatic asylum: St. James, Westminster, 2·631, St. Giles 3·031, London City 2·908, Whitechapel, 3·082, and St. George-in-the-East 2·829.

"The lunatic asylums at this age disturb the rate of mortality; thus the Colney Hatch County Asylum raises the mortality of men

in Barnet, one of the healthiest districts of Middlesex, to 3·846 per cent.

"The mortality of men in all London is at the rate of 2·468 per cent.; of which about ·365 is in the hospitals.

"*Maturity: Age* 55—65.

"The mortality of men of this age was at the rate of 3·086 per cent.; to which zymotic diseases, including fever and cholera, contributed ·313; consumption ·333; diseases of the brain ·410, heart ·413, lungs ·662, stomach ·303, kidneys ·094.

"The mortality of women was at the rate of 2·701 per cent. The zymotic diseases, consumption, brain affections, lung affections, stomach and kidney affections, were less fatal than in males. The rate of deaths by violence was ·038 in women, ·161 in men. Upon the other hand, the rate by cancer was ·093 for men, ·185 for women; by diseases of the generative organs ·001 for men, and ·031 for women, including ovarian diseases.

"In forty-nine districts the mortality of men was below 2·000, or less by 1·086 than the average; in Westhampnett 1·702, Kingsclere 1·757, Thingoe 1·460, Loddon 1·752, Depwade 1·653, Scilly Islands 1·505, Wheatenhurst 1·778, Longtown 1·741, Bootle 1·606.

"To men of this age, Alston was the most fatal district in England; their mortality there was at the rate of 6·800 per cent.; then follow Reeth 5·060, the City of London 5·014, St. Giles, London, 5·243, Whitechapel, containing a hospital, 5·483, Manchester 5·266, and Liverpool 5·350.

"*Maturity: Age* 65—75.

"The mortality of men at this period of life is more than double their mortality in the previous decenniad. In the ten years it was 6·533 per cent.; of which ·579 was by zymotic diseases; ·150 by cancer; ·239 by phthisis; ·983 by diseases of the brain, ·871 by diseases of the heart, 1·342 by lung diseases; ·484 by diseases of the digestive organs; ·245 by diseases of the urinary organs; making the aggregate mortality by local or monorganic diseases 3·964. The mortality by violence of various kinds was at the rate of ·181 per cent.

"The mortality of women at this age was 5·866, or less by ·667 than that of men. Fever was somewhat less fatal to them than to men; so also were phthisis, and all the pulmonary diseases. The mortality of women of kidney, &c., diseases was ·049, of men ·245; by violence, of women ·072, of men ·181. Upon the other hand, cancer killed women at the rate of ·235. Uterine and ovarian diseases at the rate of ·032.

"In thirteen districts of England the mortality of men of the age 65—75 was below 4·000 per cent.; it was 3·548 in the Scilly Islands, Flegg 3·667, Rothbury 3·831, Easthampstead 4·427, Henstead 4·258, Thetford 4·444, Cricklade 4·467, Tetbury 4·369, Sedbergh 4·479, Easingwold 4·253, Brampton 4·142, Bridgend 4·487, Knighton 4·455.

"In Alston the mortality at this age was 11·731 per cent.; in

Reeth 9·524; and it exceeded 9·000 in twenty-one districts, including Alston and Reeth; namely, in thirteen London districts, in Birmingham, Liverpool, Manchester, Leeds, Sheffield, and Newcastle-upon-Tyne.

"*Ripeness: Age* 75—85.

"The mortality of men at this advanced age is at the rate of 14,667 per cent., of which nearly the half is by causes undistinguished; for the functional symptoms become obscure as age advances. Only 1·004 of the deaths were by recognized zymotic diseases, ·173 by cancer, ·098 by consumption. The chief mortality was by diseases of the brain 1·709, heart 1·241, lungs 2·109, stomach ·525, kidneys ·427. By violence ·225 died.

"The mortality of women was at the rate of 13·434 per cent.; cancer being more, phthisis less, fatal to women than it was in men; of the total mortality 5·031 was by monorganic diseases; while in men the mortality by these diseases was 6·067 per cent.

"In descending to other districts the mortality was below 12·000 per cent. from all causes in fifty districts, and above 17·000 per cent. in seventy districts, including twenty-four London districts, and the districts of the chief large towns.

"*Old Age: Age* 85 *and upwards.*

"I have called this the monumental age; the cup of life is full of years; and the mortality of men is at the rate of 31·008, of women at the rate of 28·956 per cent. The forms of disease are imperfectly developed; the symptoms are obscure; and in three-fourths of the cases the deaths are simply referred to age, and natural decay, or some of the maladies which have not been inserted in the synoptic tables. Cholera did not disdain to destroy a certain number of these lingering lives; some of the men were killed by violence; some of the women were burnt by their clothes taking fire; and many died of recognized monorganic diseases of the brain and chest."

II.—*Changes in the House of Lords during the Last Parliament.*

The following statistics are extracted from the *Western Morning News*:—

"Although at the present time the topics which most engage public attention are the political elements of the next House of Commons, a glance at the losses which have been caused by death in the Upper House during the present Parliament will not be without its interest. In the subjoined statement will be found the age of each deceased peer, together with the number of losses in each order of the peerage. The creations, the accessions, a list of extinct titles, and the deaths and ages of Irish and Scotch peers are also appended:—

"Archbishops (4).—Armagh, 89; Canterbury, 82; Dublin, 76; York, 72. United ages, 319; average, 80.

"Lord Chancellor (1).—Lord Campbell, 81.

"Dukes (12).—Athol, 50; Bedford, 73; Buckingham and Chandos, 64;

Cleveland (second peer), 75; Cleveland (third peer), 72; Grafton, 73; Hamilton and Brandon, 52; Newcastle, 53; Norfolk, 45; Northumberland, 72; Richmond, 69; Sutherland, 75. United ages, 773; average 64.

"Marquises (7).—Breadalbane, 66; Bristol, 64; Dalhousie, 48; Huntly, 71; Lansdowne, 82; Normanby, 66: Townshend, 65. United ages, 462; average, 66.

"Earls (43).—Aberdeen (fourth peer), 76; Aberdeen (fifth peer), 48; Beauchamp, 78; Bradford, 76; Cadogan, 81; Camperdown, 74; Canning, 60; Carlisle, 62; Cathcart, 76; Cawdor, 70; Charlemont, 88; Clare, 71; Cottenham, 39; De Grey, 78; Denbigh, 69; Desart, 46; Eglinton and Winton, 49; Elgin, 52; Ellesmere, 39; Fortescue, 77; Gosford, 58; Guildford, 89; Harborough, 62; Harrington, 78; Ilchester, 69; Jersey (fifth peer), 86; Jersey (sixth peer), 51; Lauderdale, 79; Leven and Melville, 75; Longford, 43; Manvers, 82; Minto, 77; Morley, 54; Mornington, 59; Mount Edgcumbe, 64; Pembroke and Montgomery, 71; Poulett, 80; Stair, 88; Strafford, 88; Tankerville, 83; Waldegrave, 71; Westmoreland, 75; Yarborough, 53. United ages, 2,944; average, 68.

"Viscounts (7).—Combermere, 95; Dungannon, 64; Massereene, 51; Maynard, 79; Middleton, 72; St. Vincent, 92; Sidmouth, 69. United ages, 522; average, 74.

"Bishops (6).—Carlisle, 48; Chester, 71; Ely, 83; Peterborough, 84; Rochester, 76; Worcester, 77. United ages, 439; average, 73.

"Barons (32).—Abinger, 67; Arundell of Wardour, 75; Ashburton, 65; Berwick, 59; Braybrooke, 41; Chesham, 70; Clyde, 71; De Freyne, 72; De Saumarez, 74; Downes, 75; Elphinstone, 54; Hastings, 62; Hatherton, 72; Heytesbury, 81; Herbert of Lea, 51; Holland, 57; Lilford, 60; Londesborough, 55; Lyndhurst, 91; Macaulay, 59; Manners, 46; Monson, 66; Ponsonby, 45; Rodney, 43; Rossmore, 68; Sandys, 71; Seaton, 87; Sherborne, 83; Sudely, 62; Wentworth, 26; Willoughby de Broke, 53; Willoughby d'Eresby, 82. United ages, 2,043; average, 64.

"Irish Peers (13).—Baron Ffrench, 74; Viscount Gormanston, 84; Viscount Guillamore, 28; Viscount Harberton, 72; Baron Kinsale, 37; Baron Macdonald, 54; Earl of Mexborough, 77; Baron Muncaster, 30; Baron Oranmore and Browne, 72; Viscount Southwell, 83; Viscount Templetown, 63; Viscount Valentia, 78; Baron Waterpark, 69. United ages, 821; average 63.

"Scotch Peers (7).—Viscount Arbuthnot, 82; Earl of Dundonald, 84; Baron Reay, 87; Baroness Ruthven, 80; Baron Sinclair, 95; Baron Somerville, 77; Baron Torphichen, 91. United ages, 596; average, 85.

"Creations (10).—Baron Annaly, Baron Fitzhardinge, Baron Houghton, Baron Llanover, Baron Lyveden, Baron Herbert of Lea, Earl Russell, Baron Seymour, Baron Taunton, Baron Westbury. In addition to these it might be mentioned that the barony of Athlumney, in the peerage of Ireland, was, in 1863, granted to Sir William Somerville, one of the members for the city of Canterbury.

"Accessions (9).—The following peers, who were minors when the present Parliament assembled, have since succeeded to their titles:—His Royal Highness the Prince of Wales, Baron Abercromby, Earl Brownlow, Viscount Downe, the Duke of St. Albans, the Earl of Dunmore, the Marquis of Hastings, Viscount Hereford, and the Marquis of Ormonde.

"Translations (6).—The prelates who have been translated are as follows:—Dr. Longley, from Durham to York in 1860, and from York to Canterbury in 1862; Dr. Baring, from Gloucester and Bristol to Durham in 1861; Dr. Thompson from Gloucester and Bristol to York in 1862; Lord Marcus Gervais Beresford, from Kilmore, Elphin, and Ardagh to Armagh in 1862; Dr. Fitzgerald, from Cork to Killaloe in 1861.

"Extinct Peerages (8).—The following peerages have become extinct since the meeting of Parliament:—The earldom of Clare, the barony of Clyde, the barony of Downes, the viscounty of Dungannon, the earldom of Harborough, the earldom of Canning, the barony of Lyndhurst, the barony of Macaulay.

"It will have been seen that of the archbishops the oldest was that of Armagh, 89; the youngest, York, 72. Of the dukes, the two oldest were the second Duke

of Cleveland and the Duke of Sutherland, each of whom was 75; the youngest was the Duke of Norfolk, Hereditary Earl Marshal of England, 45. The oldest marquis was the Marquis of Lansdowne, 82; the youngest was the Marquis of Dalhousie, 48. The oldest earl was the Earl of Guildford, 89; the two youngest were the Earls of Cottenham and Ellesmere, each of whom was 39. The oldest viscount was Viscount Combermere, 95; the youngest was Viscount Massereene, 51. The oldest bishop was Dr. Davys, of Peterborough, 84; the youngest was Dr. Villiers, of Carlisle, 48. The oldest baron was Lord Lyndhurst, 91; the youngest was Lord Wentworth, 26. The Irish and Scotch peers whose deaths have been mentioned were not lords of Parliament. The oldest Irish peer was Viscount Gormanston, 84; the youngest was Viscount Guillamore, 28. The oldest Scotch peer was Baron Sinclair, 95; the youngest was Baron Somerville, 77.

"The total number of peers who have died during this Parliament amounts to 112, and their united ages reach 7,583 years. This would give a general average of 67 years to each deceased lord. The highest average age was with the archbishops, 80; next would come the viscounts, 74; the bishops show the third highest average, 73; the earls come next with 68; the marquises average 66; and the dukes and barons are the lowest, each with 64. Each of the deceased Scotch peers averaged 85; each of the Irish, 63."

III.—*The Proportion of the Elective Classes in England.*

From the same paper to which the *Journal* is indebted for the statistics of the House of Lords, the following details have been obtained:—

"Now that the general election is approaching, it may be well to glance at the distribution of seats amongst the various counties in England, and to give some idea of the proportion which the electors bear to the population in the various constituencies. At the same time the average of each class of voters in the different counties, and the general average throughout the kingdom, may be found to possess some interest.

"The Metropolis (16 members).—In the City of London the proportion of electors to the population is 1 in every 5, Lambeth 12, Finsbury and Southwark 17 Marylebone and Westminster 20, Tower Hamlets 27. Average throughout the Metropolis, 1 in 17.

"Bedford (4).—In the county 1 in 26; in the borough of Bedford 13.

"Berks (9).—In the county 1 in 35; Windsor 15, Reading 16, Abingdon 18, Wallingford 22. Average of borough voters, 1 in 18.

"Bucks (11).—In the county 1 in 29; Great Marlow 19, Wycombe 19, Buckingham 20, Aylesbury 24. Average of borough voters 1 in 20.

"Cambridge (5).—In the county 1 in 24; in the borough of Cambridge 14.

"Cheshire (11).—Southern division 1 in 34, northern division 41; Chester 11, Birkenhead 14, Macclesfield 32, Stockport 37. Average of voters in the county 1 in 37, in the boroughs 23.

"Cornwall (14).—Eastern division 1 in 25, western division 44; Launceston 12, Bodmin 15, Liskeard 15, Falmouth and Penryn 17, Truro 18, St. Ives 19 Helston 24. Average of voters in the county 1 in 34, in the boroughs 17.

"Cumberland (9).—Eastern division 1 in 19, western division 21; Cockermouth 17, Carlisle 21, Whitehaven 31. Average of voters in the county 1 in 20, in the boroughs 23.

"Derby (6).—Southern division 1 in 26, northern division 30; in the borough of Derby 16. Average of county voters, 1 in 28.

"Devon (22).—Northern division 1 in 19, southern division 43; Ashburton 10, Honiton 11, Totnes 11, Exeter 12, Barnstaple 13, Dartmouth 17, Tiverton 19, Plymouth 20, Tavistock 20, Devonport 23. Average of voters in the county 1 in 31, in the boroughs 16.

" Dorset (14).—In the county 1 in 29; Lyme Regis 13, Weymouth 13, Dorchester 14, Bridport 15, Shaftesbury 18, Wareham 18, Poole 19. Average of voters in the boroughs, 1 in 16.

" Durham (10).—Southern division 1 in 25, northern division 67; Durham 12, Sunderland 31, South Shields 32, Gateshead 34. Average of voters in the county 1 in 46, in the boroughs 27.

" Essex (10).—Southern division 1 in 29, northern 35; Maldon 7, Harwich 14, Colchester 18. Average of voters in the county 1 in 32, in the boroughs 13.

" Gloucester (15).—Eastern division 1 in 27, western 29; Gloucester 9, Bristol 11, Tewkesbury 13, Cheltenham 14, Cirencester 14, Stroud 26. Average of voters in the county 1 in 28, in the boroughs 14.

" Hants (16).—Northern division 1 in 43, southern division 45; Southampton 12, Lymington 16, Winchester 16, Petersfield 17, Andover 22, Portsmouth 23, Christchurch 30. Average of voters in the county 1 in 44, in the boroughs 19.

" Hereford (7).—In the county 1 in 16; Leominster 15, Hereford 16.

" Hertford (5).—In the county 1 in 30; in the borough of Hertford 12.

" Huntingdon (4).—In the county 1 in 20; in the borough of Huntingdon 15.

" Isle of Wight (3).—In the county 1 in 24; in the borough of Newport 12.

" Kent (18).—Eastern division 1 in 33, western division 51; Canterbury 11, Rochester 12, Maidstone 13, Sandwich 13, Greenwich 16, Hythe 18, Dover 20, Chatham 22. Average of voters in the county 1 in 42, in the boroughs 16.

" Lancashire (27).—Northern division 1 in 43, southern division 75; Lancaster 12, Manchester 17, Salford 21, Clitheroe 23, Liverpool 23, Rochdale 27, Bury 28, Ashton 29, Preston 29, Bolton 32, Blackburn 36, Warrington 36, Oldham 39, Wigan 42. Average of voters in the county 1 in 59, in the boroughs 28.

" Leicester (6).—Northern division 1 in 17, southern division 25; in the borough of Leicester 14. Average of county voters 1 in 22.

" Lincoln (13).—In the northern and southern divisions the proportion is the same—1 in 20; Great Grimsby 14, Lincoln 14, Stamford 14, Grantham 15, Boston 17. Average of voters in the county 1 in 20, in the boroughs 15.

" Middlesex (2).—In the county 1 in 171.

" Monmouth (3).—In the county 1 in 33, in the district 18.

" Norfolk (12).—Western division 1 in 28, eastern 35; Norwich 13, Lynn 16, Thetford 19, Yarmouth 23. Average of voters in the county 1 in 31, in the boroughs 18.

" Northampton (8).—Southern division 1 in 24, northern 25; Northampton 13, Peterborough 20. Average of voters in the boroughs, 1 in 16.

" Northumberland (10).—Northern division 1 in 21, southern division 45; Berwick 18, Newcastle 19, Tynemouth 31, Morpeth 32. Average of voters in the county 1 in 33, in the boroughs 25.

" Nottingham (10).—Southern division 1 in 23, northern 53; Nottingham 11, Newark 15, East Retford 18. Average of voters in the county 1 in 38, in the boroughs 15.

" Oxford (7).—In the county 1 in 34; Oxford 9, Banbury 17, Woodstock 24. Average of borough voters, 1 in 17.

" Rutland (2).—In the county 1 in 12.

" Shropshire (12).—Northern division 1 in 31, southern division 35; Bridgnorth 11, Shrewsbury 14, Ludlow 15, Wenlock 21. Average of voters in the county 1 in 33, in the boroughs 15.

" Somerset (13).—In the eastern and western divisions the proportion of electors is the same—1 in every 24; Wells 14, Bath 15, Taunton, 18, Bridgwater, 19, Frome 23. Average of voters in the county 1 in 24, in the boroughs 18.

" Stafford (17).—Northern division 1 in 37, southern division 55, Stafford 7, Lichfield 9, Newcastle-under-Lyme 13, Tamworth 20, Walsall 27, Wolverhampton 33, Stoke-on-Trent 41. Average of voters in the county 1 in 46, in the boroughs 21.

" Suffolk (9).—Eastern division 1 in 27, western division 32; Bury St. Edmunds 18, Ipswich 18, Eye 21. Average of voters in the county 1 in 29, in the boroughs 19.

"Surrey (7).—Western division 1 in 30, eastern division 79; Reigate 10, Guildford 11. Average of county voters, 1 in 54.

"Sussex (18).—In both the eastern and western divisions the proportion of electors is 1 in 39; Arundel 13, Chichester 13, Lewes 14, Brighton 15, Hastings 16, Shoreham 16, Horsham 17, Midhurst 17, Rye 18. Average of voters in the county 1 in 39, in the boroughs 15.

"Warwick (10).—Southern division 1 in 28, northern division 70; Coventry 7, Warwick 15, Birmingham 26. Average of voters in the county 1 in 49, in the boroughs 16.

"Westmoreland (3).—In the county 1 in 14; in the borough of Kendal 1 in 28.

"Wilts (18).—Northern division 1 in 32, southern division 30; Marlborough 18, Salisbury 18, Devizes 19, Malmesbury 19, Chippenham 20, Cricklade 20, Westbury 20, Calne 28, Wilton 34. Average of electors in the county 1 in 31, in the boroughs 22.

"Worcester (12).—In both the eastern and western divisions the proportion is the same—1 in 25; Worcester 11, Evesham 13, Droitwich 17, Bewdley 19, Kidderminster 31, Dudley 39. Average of voters in the county 1 in 25, in the boroughs 22.

"York (37).—North Riding 1 in 22, West Riding 37, East Riding 41; Beverley 9, York 10, Thirsk 12, Malton 13, Northallerton 14, Scarborough 15, Richmond 16, Whitby 16, Hull 17, Pontefract 17, Ripon 18, Huddersfield 19, Knaresborough 20, Wakefield 22, Halifax 23, Sheffield 23, Bradford 27, Leeds 29. Average of voters in the county 1 in 33, in the boroughs 18.

"It will thus appear that the highest rate of county voters is in Rutland, where the proportion is 1 in 12; and the lowest rate is in Middlesex, where it is 1 in 171. The general average of county voters throughout the kingdom is 1 in 35. The exact average is found in Berks alone, and in twenty-nine counties the rate is above it, namely, in Bedford, Bucks, Cambridge, Cornwall, Cumberland, Derby, Devon, Dorset, Essex, Gloucester, Hereford, Hertford, Huntingdon, Isle of Wight, Leicester, Lincoln, Monmouth, Norfolk, Northampton, Northumberland, Oxford, Rutland, Shropshire, Somerset, Suffolk, Westmoreland, Wilts, Worcester, and York. In the following eleven counties the rate of county voters is below the general average:—Cheshire, Durham, Hants, Kent, Lancashire, Middlesex, Nottingham, Stafford, Surrey, Sussex, Warwick.

"The highest rate of borough electors is found in Surrey, where (excluding the metropolitan constituencies) it is about 1 in 10; the lowest rate is in Lancashire, where the proportion is 1 in 28. The highest in any individual constituency is in the city of London, where it is 1 in 5; the lowest is the borough of Wigan, where it is 1 in 42. The general average of borough voters throughout the kingdom is 1 in 18. This, like the county average, is found in Berks, and also in Monmouth, Norfolk, Somerset, and York. Besides the Metropolis, twenty-two counties are above the average, namely, Bedford, Cambridge, Cornwall, Derby, Devon, Dorset, Essex, Gloucester, Hereford, Hertford, Huntingdon, Isle of Wight, Kent, Leicester, Lincoln, Northampton, Nottingham, Oxford, Shropshire, Surrey, Sussex, Warwick. In the following twelve counties the proportion of borough electors is below the average of the kingdom:—Bucks, Chester, Cumberland, Durham, Hants, Lancashire, Northumberland, Stafford, Suffolk, Westmoreland, Wilts, Worcester.

"It may be remarked that as a rule the highest proportion of borough voters is found in the cathedral cities. The City of London stands at the head of this list, with 1 in 5; Carlisle is the lowest, with 1 in 21. The average rate is 1 in 13, and this is found in Chichester and Norwich. In the following twelve cities the rate is above the average: Bristol, Canterbury, Chester, Durham, Exeter, Gloucester, Lichfield, London, Oxford, Rochester, Worcester, York. Nine are below the average rate for cities, namely, Bath, Carlisle, Hereford, Lincoln, Manchester, Peterborough, Salisbury, Wells, and Winchester.

IV.—*Birth-rate and Death-rate in Sydney and Melbourne.*

From the *Melbourne Argus*:—

"A recent article in the *Sydney Morning Herald* furnishes us with the materials for a very interesting comparison between the rates of birth and death in the suburbs of Sydney and in those of Melbourne. The facts collected by our contemporary relate to the year 1864, and they show that the eight suburbs of Sydney contained in that year a population numbering 43,625 persons. In our own case, the more leisurely movements of the Registrar-General give us access to no authentic *data* later than 1863, and we find that in that year the population of the Melbourne suburbs amounted to 114,000 persons. The total number of births in the Sydney suburbs in 1864 was 1,993 and the total number of deaths, 833; and in Melbourne the corresponding numbers in 1863 were 5,590 births and 2,340 deaths. The mean birth-rate over the whole of the Sydney suburbs, therefore, was 45·7 per 1,000, and the mean death-rate 19·1 per 1,000. In the Melbourne suburbs the mean birth-rate was 48·9 per 1,000, and the mean death-rate 21·3 per 1,000—showing that our rate of birth and our rate of mortality are both higher than those of Sydney.

"The detailed birth-rates and death-rates of the several suburbs of Sydney separately are as follow:—

Sydney Suburbs.	Population.	To 1,000 Persons Living.	
		Births.	Deaths.
Balmain	4,668	48·4	14·4
Glebe	4,406	48·8	23·4
Newtown	5,017	37·9	17·3
Redfern and Botany	7,940	64·9	29·5
Paddington	8,020	39·0	17·3
Concord	2,792	46·9	20·8
St. George	6,674	37·3	14·7
„ Leonard's	4,101	37·6	11·4

"Omitting the particulars for the shipping in Hobson's Bay, the following are the rates of birth and death in each of the Melbourne suburbs in 1863:—

Melbourne Suburbs.	Population.	To 1,000 Persons Living.	
		Births.	Deaths.
North Melbourne and Carlton	16,798	79·5	27·3
Fitzroy	11,807	42·8	19·8
East Collingwood	12,653	58·8	21·3
Richmond	11,355	44·6	21·6
Jika Jika parish	8,215	36·5	22·4
South Yarra and Prahran	12,900	35·4	21·0
Emerald Hill and Sandridge	12,393	48·7	20·6
St. Kilda and Brighton	11,236	33·9	12·4
Doutta Galla and Keilor	3,087	48·6	16·2
Boroondara and Heidelberg	5,722	54·7	15·0
Cut-paw-paw parish	6,234	60·9	20·5

"It will be seen by these figures that in both Sydney and Melbourne the highest birth-rate and the highest death-rate were experienced in the same district. In Sydney, Redfern and Botany had a birth-rate amounting to 64·9 to every 1,000 of the living population, and a death-rate of 29·5 per 1,000. In Melbourne, the northern district and Carlton had a birth-rate of 79·5 per 1,000, and a death-rate of 27·3 per 1,000. The highest birth-rate in any of the Melbourne suburbs, therefore, was considerably higher than that of any of the Sydney suburbs, while the highest death-rate was somewhat lower in North Melbourne than in Redfern. If, however, we have the advantage in this respect, Sydney has the advantage in others. For instance, the birth-rate in the Sydney suburbs is more uniform than in those of Melbourne. Though we have four districts in which the rate of birth rises above 50 per 1,000, while Sydney has only one, Sydney has no suburb in which it sinks lower than 37 per 1,000, while we have three. The Sydney suburbs, again, have on the whole a more healthy rate of mortality than the Melbourne suburbs. If 20 per 1,000 be assumed as the mean death-rate of the two cities, it will be found that Sydney has three suburbs in excess of that rate, and five below it; while Melbourne has seven above and four below it. As regards the extremes of the birth-rate and death-rate, the honours are divided. Melbourne attains the highest rate of birth, and Sydney the lowest rate of mortality. The following are the figures:—

	Birth-rate.		Death-rate.	
	Highest.	Lowest.	Highest.	Lowest.
Melbourne	79·5	33·9	27·3	12·4
Sydney	64·9	37·3	29·5	11·4

"Thus the range of the birth-rate is greater in Melbourne than in Sydney, and the range of the death-rate is greater in Sydney than in Melbourne.

"When we compare the foregoing figures with similar data for European countries and capitals, we find that the two Australian cities enjoy an absolute supremacy in the matters of births. The prolificness of our populations is something evidently never dreamt of in the philosophy of the antipodean nations. In England the average birth-rate for the ten years 1853-62 was 34 per 1,000; in London, it was 33·8 per 1,000. The highest average rate in any English county, during the same period, was 41 per 1,000 in Staffordshire and Durham—a ratio not even equal to the *average* rate of birth in the suburbs of either Sydney or Melbourne, and lower by nearly 40 per 1,000 than the birth-rate of North Melbourne. The lowest birth-rate at home is that of the extra-metropolitan part of Surrey, which was 29·4 per 1,000, or nearly 5 per 1,000 less than the lowest Melbourne suburb, and 8 per 1,000 less than the lowest Sydney suburb. The same with other countries. Scotland has a birth-rate of 34·4 per 1,000, rising in the towns to 38 per 1,000. In France the birth-rate is 26·6 per 1,000; in Austria, 39·4 per 1,000; in Italy, 38·2 per 1,000—none of these rates at all approaching the average birth-rate of either Sydney or Melbourne. The disparity between the rates of mortality here and at home—at all events, so far as England is concerned—is not so marked. The average death-rate in England, for the ten years 1853-62 was 22 per 1,000; and in London, 23·8 per 1,000; in the Melbourne suburbs it was 21·3, and in the Sydney suburbs 19·1 per 1,000. In no English county, however, did the death-rate rise higher than 24·4 per 1,000, while in Sydney, as we know, the highest rate was 29·5 per 1,000, and in Melbourne 27·3 per 1,000. On the other hand, in no English county did the death-rate fall so low as it did in some of the suburbs of the two Australian cities. Rural Surrey, which had the lowest birth-rate had also the lowest death-rate, namely, 17·9 per 1,000, whereas St. Kilda and Brighton had one of 12

per 1,000, and St Leonards (Sydney), one of 11 per 1,000. It would appear, therefore, that the mortality of the Sydney and Melbourne suburbs is more fluctuating than that of the English counties, where the difference between the highest and the lowest death-rate did not exceed 6·5 per 1,000, while the difference between the highest and lowest Sydney suburb was 18·1 per 1,000, and the difference between the highest and lowest Melbourne suburb 14·9 per 1,000. In England, 17 per 1,000 is regarded as a sort of normal rate of mortality, that being the mean death-rate of all the healthiest rural districts. Three of the Melbourne and three of the Sydney suburbs have death-rates considerably lower than this; and, doubtless, if proper sanitary measures were adopted, many of the others might be reduced to equivalent figures. But this is a subject upon which we cannot enter at present."

V.—*Infanticide and Illegitimacy.*

From the *Economist*:—

"It seems probable that on the re-assembling of Parliament some effort will be made to deal with the crime of child murder. It is not a new crime, nor is it certain that it has greatly increased; but it has recently become very obvious, and it is the habit of English people to deal with evils only when they are forced on public attention. The case of Charlotte Winsor, the terrible statements of Dr. Lancaster, who asserts persistently that there must be, from the records of his court, 12,000 women in London who have murdered their children, and some calculations, certainly inexact and probably exaggerated, as to the connection between the crime and some causes of death which appear too frequently in the returns, have shocked the public conscience; and though the public mind is still far from decided on any particular course, it is still improbable that the session will pass over without some new effort. Indeed, the statements made by Mr. Justice Willes, on the Western Circuit, as to the imperfection of a law which punishes the concealment of the body of a child but does not punish mere concealment of birth, and which leaves it doubtful whether the killing of a half-born baby is legally a crime at all—if it is one, it is abortion, and not murder—necessitate legislation. It is, therefore, highly expedient that the public should inform itself of the facts of the case, and not be led away by sentimental exaggerations to miss the point at which it intends to aim. That point is, we think, pretty clearly to be seen through the haze of discussion, and may be shortly stated thus: the country intends to put down child murder by any means which will not involve a great relaxation of the social penalties on unchastity. So strong is the public dread of being led by their horror of one crime into increasing the other, that there is a tendency to remain inactive out of sheer fear of action, and we shall probably have speeches opposing all plans from a vague dread of increasing that prevalence of illegitimacy which one paper already asserts is so enormous among us. We shall be told to rely on education, and gradual improvement, and the rest of those vague phrases by which a terribly over-conscious age tries to make itself believe that progress is not a tide which ebbs and flows, but a rushing stream. It is this waste of power in vague talk which we want to avoid, and we, therefore, call the attention of sensible men to the figures compiled some time since by Mr. W. G. Lumley, secretary to the Poor Law Board.

"It is as demonstrable as anything in social statistics can be, that illegitimacy is not a special English characteristic, that it is not on the increase, that it is as fixed a quantity in proportion to population as the number of suicides, that it can be affected by legislation in a certain direction, and that education and civilization, so far from eradicating, tend slightly but visibly to increase it. We will give the

facts which, in our judgment, support each of those assertions. First, England stands fifth in Europe in the scale of morality, the only countries which show a better return being Sardinia, Holland, Spain, Switzerland, and Tuscany, and in all these, except Holland and Switzerland, there are believed to be many more adulterine births, and at least as much general vice as in England. The following is a comparison with the countries most like our own in creed and social character :—

	Proportion of Illegitimates to Children.
England	6·5
Denmark	9·351
Hanover	9·89
Prussia	8·44
Sweden	9·39
Saxony	15·98

"England, therefore, being among Protestant countries the best. Moreover, illegitimacy does not increase, but, if anything, slightly declines, though the returns we quote present the usual mysterious phenomenon that vice bears an unvarying relation to number :—

Year.	Gross Number of Registered Births.	Proportion per Cent. of Illegitimate Births to Gross Number Registered.
1841	248,554	6·4
'42	517,739	6·7
'43	527,325	6·8
'44	540,763	6·8
1845	543,521	7·0
'46	572,625	6·7
'47	539,965	6·7
'48	563,059	6·5
'49	578,159	6·8
1850	593,422	6·8
'51	615,865	6·8
'52	624,012	6·8
'53	612,391	6·5
'54	634,405	6·4
1855	635,043	6·4
'56	657,453	6·5
'57	663,071	6·5
'58	654,481	6·6
'59	689,881	6·5

"Again, from the date of the law passed in 1844, under which the guardians were prohibited from prosecuting the father, and the whole burden of the action, both of affiliation and maintenance, was thrown upon the woman, pauper illegitimacy steadily decreased.

Years.	Total Illegitimate Children.	Percentage on Population.
January, 1849.....	17,028	·12
July, ,, ...	14,639	·10
January, 1850.....	15,897	·11
July, ,, ...	13,419	·09
January, 1851.....	14,419	·09
July, ,, ...	12,819	·08
January, 1852.....	13,808	·09
July, ,, ...	12,309	·08
January, 1853.....	12,741	·08
July, ,, ...	11,119	·07
January, 1854.....	13,461	·08
July, ,, ...	12,705	·08
January, 1855.....	14,528	·09
July, ,, ...	13,080	·08
January, 1856.....	15,373	·09
July, ,, ...	12,325	·07
January, 1857.....	14,397	·08
July, ,, ...	11,761	·07
January, 1858.....	14,417	·08
July, ,, ...	11,448	·06
January, 1859.....	12,353	·07

"It is, however, by comparing counties that we obtain the most remarkable result. Striking off the metropolis, in which the ratio of education is very high and that of illegitimacy very low—a fact, unfortunately, not due to virtue, but to the prevalence of the great sin of great cities—we find that 'in Cumberland, Westmoreland, Hereford, the East and North Riding of Yorkshire, the illegitimacy is very high, and so is the standard of education, and the prudence in marrying. But in Monmouthshire, Cornwall, Lancashire, Staffordshire, the education is low, the illegitimacy is also low, but there is a high proportion of early marriages. In Norfolk, however, the state of education as regards the men is far below the average, though as regards the women it is above it. There the number of men who marry under age is rather above the average, but that of the women is below it. This county has long been distinguished for the high rate of illegitimacy.'

"Education, therefore, by developing the fear of poverty, postpones the age of marriage, and consequently increases the temptation to vice, a result which, could we collect statistics from the professional classes alone, would be proved to be an almost unvarying law. No influence in the way of packing or density of population has any appreciable effect, some of the thinnest districts being among the worst, and Scotland, which is much less packed than England, being much lower in the scale of this form of morality. Indeed, so slight is any recognisable influence, yet so permanent are the ratios in some localities, that the Registrar-General is half inclined to attribute the differences to race, and believe that there is more illegitimacy among Danes than Saxons, and so on, a somewhat far-fetched theory.

"Should these figures prove, on inquiry, to be supported by those in the latest returns, they must be taken to point directly to certain conclusions of great value to the legislature. One is, that it is hopeless to think of extinguishing child-murder by extinguishing illegitimacy, that condition being rather more frequent as civilization advances. It is also hopeless to attack it by laws for the prevention of crowding, which has clearly nothing to do with it. No legislative movement in fact has any effect unless it brings home to the man and the woman the heavy penalty which may follow upon indulgence, and it is not proved that an addition to these penalties may not be followed by an addition to the number of murders. It

is, therefore, essential, if we would act efficiently, to act upon the mother *after* the child has been born, either by making coercion steadier and more severe, or by relieving her of the care of her child, or by relaxing the rules which forbid parish-aid for the keep of the child while the mother continues at work.

"Each of these plans has its own very grave drawbacks. It is very difficult to apply steady coercion while juries are so unwilling to convict, and while the public secretly feel its conscience shocked at the impunity conceded to the father while such a heavy penalty is exacted from the mother. It is equally difficult to relieve the mother of her babe without decreasing the restraints on licentiousness—restraints, it must be added, as necessary on women as on men,—and without rousing among the married to whom children are a heavy burden a savage idea that they are punished for being chaste. No poorhouse relieves *them* of their babes. And lastly, a separate allowance for an illegitimate child, if granted out of the 'house,' will in the end make large illegitimate families a source of profit, and restore the worst abuse of the old poor law. The single object, therefore, must be to discover some plan which, while diminishing the burden upon the mother, shall diminish no sexual restraint,—a problem, the solution of which has taxed for years the wisest heads on the Continent, and if taken up seriously here, will probably overtax ours."

VI.—*Shipping Casualties in* 1864.

The Council have been furnished with a series of Tables upon Shipping Casualties, prepared by Mr. Henry Jeula, of Lloyd's, from data collected by himself. The statistics printed at p. 459, *et seq.*, are arranged in eight geographical sections, namely:—(1) Africa:—West Coast, Cape de Verds, &c. (2) America:—North, British Territory. (3) America:—North, United States. (4) Australia, Tasmania, and New Zealand. (5) Baltic, Norway, White Sea, &c. (6) Belgium, Holland, and West Coast of Denmark. (7) Brazils, River Plate, &c. (8) Cape of Good Hope, St. Helena, Ascension, Algoa Bay, Natal, &c.

It will be seen that the tables not only discriminate the kind of casualty according to *Lloyd's List*, but whether it happened to a sailing vessel or a steamer, whether the injured vessel was bound to or from the section indicated.

The series will be completed by the publication, in the next number of the *Journal*, of the tables relating to the other quarters of the globe, namely, China and the Oriental Archipelago; East Indies, Birmah, &c.; France, Portugal, Azores, &c.; Mediterranean, Black Sea, and Sea of Azof; Pacific and West Coast of South America, and the West Indies, Vera Cruz, Carribean Sea, &c.

Mr. Jeula regards his tables not as a full, but simply as an "approximate record" of a very important subject.

*** *The Report of the Registrar-General for Ireland for the March Quarter, which was received too late for insertion in the last Number, is printed below.*

IRELAND.

MARRIAGES IN THE QUARTER ENDED 31ST DECEMBER, 1864; AND BIRTHS AND DEATHS IN THE QUARTER ENDED 31ST MARCH, 1865.

This return includes the MARRIAGES *registered* during October, November, and December, 1864; and the BIRTHS and DEATHS *registered* during January, February, and March, 1865, in the 719 Registrars' districts of Ireland. The districts are co-extensive with the Dispensary districts of the 163 Poor Law Unions; which latter form the districts of the Superintendent Registrars.

MARRIAGES.—The marriages *registered* during the last quarter of 1864 amounted to 6,352, being equal to an annual ratio of 1 marriage to every 228 of the population.† The number during the first quarter was 9,578, or 1 marriage to every 151; in the second quarter it was 6,029, or 1 to every 240; and during the third quarter the number *registered* amounted to 5,414, or 1 to every 268, making a total for the year 1864, of 27,373, a number affording a ratio of 1 marriage to every 212 of the population.*

Of the 27,373 marriages during the year, 18,912 were between Roman Catholics, and were *registered* under the provisions of the Act 26 and 27 Vict., cap. 90; they afforded a ratio of only 1 marriage to every 238 of the Roman Catholic population;* and 8,461 were marriages between Protestants (including "mixed marriages"), being 1 in every 152 of the Protestant population.*

BIRTHS.—The births *registered* during the quarter ending 31st of March last, amounted to 38,325, representing an annual ratio of 1 birth in every 37·8 of the population.* The number *registered* during the corresponding quarter of the year 1864 was 30,330, or 1 in every 48 of the population;* thus showing an increase of 7,995 between the two periods. A portion of this increase must be attributed to the fact of some of the births which occurred at the close of the first quarter of 1864 (the first year of registration), not having been *registered* until the beginning of the second quarter (21 days being allowed to elapse after a birth before the person responsible for registering it becomes liable to a fine of 20*s.*).

DEATHS.—The deaths *registered* during the first three months of 1865 amounted to 29,341, or an annual mortality of 1 in 49·4 of the population.* The number *registered* during the corresponding quarter of 1864 was 28,540, which afforded an annual ratio of 1 in 51.

In the Superintendent Registrar's district of Belfast, the deaths during the quarter afforded an annual ratio of 1 in 30; in Dublin South, 1 in 32; in Dublin North, Navan, Clonmel, and Dungarvan, 1 in 35 each; in Lisburn, 1 in 36; in New Ross, 1 in 38; and in Balrothery and Waterford, 1 in 39 each.

In the following Superintendent Registrars' districts, the number of deaths *registered* during the quarter *did not equal an annual ratio of* 1 *in* 70:—Tobercurry, 1 in 71; Castlereagh, Ennistimon, and Swineford, 1 in 73 each; Donegal, Mountbellew, and Galway, 1 in 74 each; Bawnboy, 1 in 75; Letterkenny, 1 in 76; Stranorlar, Bantry, and Cahersiveen, 1 in 78 each; Killala, 1 in 80; Tulla, 1 in 82; Skull, 1 in 83; Listowel, 1 in 87; Newport, 1 in 91; *and Ballyvaghan*, 1 *in* 122.

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* According to the Census of 1861.

There can be but little doubt that the very low rate of mortality represented by the number of deaths *registered* in these districts is to be attributed not to an immunity from disease, but to a neglect on the part of the inhabitants to comply with the provisions of the Registration Act.

Emigration.—The number of persons leaving the ports of Ireland, who stated to the enumerators "that it was *not their intention to return*," amounted, during the first quarter of 1865, to 15,848—8,654 males and 7,194 females—being 11,777, or 43 per cent. less than the number who left during the corresponding period of 1864; the numbers in each month were as under:—

Emigration from Ireland during the Months of January, February, and March, 1865 *and* 1864.

Months.	Number of Emigrants in						Decrease in 1865 Compared with 1864.		
	1865.			1864.					
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
January ..	1,608	1,266	2,874	2,942	2,321	5,263	1,334	1,055	2,389
February..	2,675	2,314	4,989	4,383	3,520	7,903	1,708	1,206	2,914
March ...	4,371	3,614	7,985	7,945	6,514	14,459	3,574	2,900	6,474
Total	8,654	7,194	15,848	15,270	12,355	27,625	6,616	5,161	11,777

Decrease of the Population.—The births *registered* during the quarter, as already stated, amounted to 38,325, the deaths to 29,341, and the number of emigrants to 15,848; it would therefore appear that the population of Ireland decreased during the three months by 6,864, being the excess of the deaths over the births added to the number of emigrants.

Prices of Provisions.—The price in Dublin, of the 4-lb. loaf during the thirteen weeks of the quarter was $5\frac{1}{2}d.$ It was 6*d.* during the corresponding period of 1864.

The average price of oatmeal, at the Dublin Corn Exchange, was 11*s.* 9*d.* per cwt. during the past quarter, ranging from 11*s.* 2*d.* in the seventh week of the quarter to 12*s.* 6*d.* in the last week; the average price in the corresponding period of 1864 was 11*s.* per cwt., varying from 10*s.* 5*d.* in the last week of the quarter to 13*s.* in the fifth week.

The prices of potatoes at Dublin Market during the first quarter of 1865 averaged from 3*s.* 1*d.* to 3*s.* 7*d.* per cwt.; in the first three months of 1864 the average was 2*s.* 6*d.* to 3*s.* 3*d.*

The average price of beef at the Dublin Cattle Market during the first three months of 1865, ranged from 54*s.* 6*d.* to 68*s.* per cwt. During the first quarter of 1864 the average prices were from 51*s.* 6*d.* to 64*s.* 6*d.* per cwt.

Health of the People.—The mortality, which is invariably greatest in the first quarter of the year, was in some localities excessively high during the months of January, February, and March, of the present year.

The increased mortality in these localities may be referred to two causes: in the first place, to the inclemency of the weather, and in the second place, to the prevalence of fever, scarlatina, small-pox, and other zymotic diseases.

As to the first cause, the inclemency of the weather: from the meteorological returns furnished by Captain Wilkinson, it may be observed that the mean temperature of the air for the quarter ending March 31, 1865, was 38·9° Fahrenheit; whereas during the corresponding quarter of last year it was 40·2°, or 1·3° higher.

Some few of the registrars report that the sanitary condition of their districts has been attended to; but, in the majority of the notes, complaints are made as to the utter neglect of sewage, cleansing, or any other measure which might tend to the healthfulness of the localities. It is to be hoped that the publication of the valuable notes furnished by the registrars to the Registrar-General may have the effect of showing the authorities the necessity of enforcing such measures as may tend to remove the sources of preventible diseases, which, though most fatal (from obvious reasons) to the poorer classes, yet, as experience fully demonstrates, extend to and carry off the rich.

The Weather.—The following meteorological observations, taken at the Ordnance Survey Office,* Phœnix Park, Dublin, during the first quarter of the year 1865, have been furnished by Captain Wilkinson, R.E., by direction of the Superintendent of the Ordnance Survey.

Meteorological Observations taken at the Ordnance Survey Office, Phœnix Park, Dublin.

Months.	Barometer.*			Thermometer.			Rain-fall.
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	
	Inches.	Inches.	Inches.	°	°	°	Inches.
January, 1864	30·404	29·338	29·910	52·8	14·8	40·1	1·438
„ '65	30·154	28·357	29·462	51·7	20·4	35·8	1·690
February, 1864	30·386	29·011	29·755	57·6	19·5	37·7	·971
„ '65	30·423	28·639	29·697	53·5	25·0	40·4	2·788
March, 1864	30·064	28·742	29·509	58·7	26·8	42·7	2·818
„ '65	30·190	29·115	29·793	60·9	25·5	40·4	1·501
							Total.
Mean of 1st Quarter, 1864	30·285	29·030	29·725	56·4	20·4	40·2	5·227
„ '65	30·256	28·704	29·651	55·4	23·6	38·9	5·979

Months.	Direction of the Wind at 9·30 A.M. Number of Days on which the Wind blew from the								Calm.
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
January, 1864	—	—	2	7	5	10	5	—	2
„ '65	1	1	1	2	3	9	11	1	2
February, 1864	2	2	6	2	—	8	3	4	2
„ '65	1	3	7	—	1	5	11	—	—
March, 1864	2	4	10	1	—	7	5	2	—
„ '65	8	1	2	4	1	1	12	1	1
Total of 1st Quarter, 1864	4	6	18	10	5	25	13	6	4
„ '65	10	5	10	6	5	15	34	2	3

* Latitude, 53° 21′ 44″·65 north. Longitude 6° 21′ 6″·35 west. Height above the sea, 158·8 feet. From the 1st January, 1865, inclusive, the barometer has been corrected for altitude, as well as reduced to 32° Fahrenheit.

The mean height of the barometer during the quarter was 29·651 inches (that of the corresponding quarter of last year was 29·725 inches); the highest reading (30·423 inches) occurred on the 10th February, at 9·30 A.M., wind E.S.E.; the minimum reading (28·357 inches) was on the 14th January, at 9·30 A.M., wind W.N.W.

The mean temperature of the air during the quarter was 38·9° (in the corresponding period of last year it was 40·2°); the maximum registered by the thermometer was 60·9°; and the minimum was 20·4°. The temperature on the grass was below 32° on 24 nights of the month of January, on 13 nights in February, and on 19 nights in March.

The rain-fall during last quarter measured 5·979 inches (in the corresponding quarter of 1864 it was 5·227 inches). The greatest rain-fall was in the month of February, when 2·788 inches were registered.

There was a prevalence of westerly winds, as it blew from that direction on 34 days, viz., on 11 days in January, 11 days in February, 12 days in March; and from S.W. on 15 days—9 days in January, 5 days in February, and 1 day in March, at 9·30 A.M.

IRELAND:—*Marriages in the Quarter ended 31st December*, 1864; *and Births and Deaths in the Quarter ended 31st March*, 1865.

Divisions.	Area in Statute Acres.	Population in 1861.	Marriages.	Births.	Deaths.
I. North-Eastern ...	2,328,305	1,124,041	1,846	8,146	6,297
II. North-Western...	2,392,501	574,745	597	3,438	2,574
III. Eastern	1,993,016	829,569	1,171	5,460	5,064
IV. North Midland....	2,019,408	575,289	490	3,451	2,599
V. South Midland...	2,361,709	515,272	472	3,018	2,491
VI. Western	4,088,459	822,878	512	5,216	3,298
VII. South-Eastern	1,826,172	500,957	570	3,300	2,903
VIII. South-Western..	3,313,071	855,813	694	6,296	4,115
Total of Ireland...	20,322,641	5,798,967	6,352	38,325	29,341

Note.—The summary of births, deaths, and marriages printed at p. 348 of this volume, being incomplete with respect to the Irish return, the full particulars are given below:—

SUMMARY *of* MARRIAGES, *in the Quarter ended 31st December*, 1864; *and* BIRTHS *and* DEATHS, *in the Quarter ended 31st March*, 1865.

COUNTRIES.	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
England and Wales	37,324,883	20,066,224	53,069	194,287	140,646
Scotland	19,639,377	3,062,294	6,639	28,608	20,785
Ireland	20,322,641	5,798,967	6,352	38,325	29,341
GREAT BRITAIN AND IRELAND	77,286,901	28,927,485	66,060	261,220	190,772

MARRIAGES, BIRTHS, AND DEATHS IN THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES IN THE QUARTER ENDED 31ST MARCH, 1865, AND BIRTHS AND DEATHS IN THE QUARTER ENDED 30TH JUNE, 1865.

THIS Return comprises the BIRTHS and DEATHS registered by 2,200 Registrars in all the districts of England during the spring quarter that ended on June 30th, 1865; and the MARRIAGES in 12,765 churches or chapels, about 5,207 registered places of worship unconnected with the Established Church, and 641 Superintendent Registrars' offices, in the quarter that ended on March 31st, 1865.

Marriages were numerous in the first three months of the present year, chiefly in consequence of increased activity in the manufactures and other industry of the northern populations; the birth-rate in the second quarter was high, as it has been in every quarter since the summer of 1863; and the death-rate was above the average, for while the southern parts of the country were remarkably healthy, the mortality was high in Wales, and it was not low in some northern counties.

ENGLAND:—MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1859-65, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1859-65:—*Numbers.*

Years.....	'65.	'64.	'63.	'62.	'61.	'60.	'59.
Marriages No.	—	180,263	173,510	164,030	163,706	170,156	167,723
Births..... ,,	—	739,763	727,417	712,684	696,406	684,048	689,881
Deaths..... ,,	—	495,520	473,837	436,566	435,114	422,721	440,781

QUARTERS *of each Calendar Year,* 1859-65.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	36,835	37,948	35,528	33,953	33,274	35,150	35,382
June ..... ,,	—	44,596	44,146	40,853	42,012	43,777	42,042
Septmbr..... ,,	—	44,650	41,932	40,600	39,884	40,541	39,803
Decmbr. .... ,,	—	53,069	51,904	48,624	48,536	50,688	50,496

QUARTERS *of each Calendar Year*, 1859-65.

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	194,287	192,926	186,341	181,990	172,933	183,180	175,532
June ..... ,,	192,921	188,641	189,340	185,554	184,820	174,028	175,864
Septmbr..... ,,	—	180,752	173,439	172,709	172,033	164,121	168,394
Decmbr. .... ,,	—	177,444	178,297	172,431	166,620	162,719	170,091

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	140,646	143,030	128,096	122,019	121,215	122,617	121,580
June ..... ,,	116,006	116,899	118,121	107,392	107,558	110,869	105,631
Septmbr..... ,,	—	112,133	112,504	92,381	101,232	86,312	104,216
Decmbr. .... ,,	—	123,458	115,116	114,774	105,109	102,923	109,354

MARRIAGES.—Of weddings the number in the March quarter was 36,835; the daily average was 409. As it is the season in which employment is the slackest, it is also that invariably in which marriages are the fewest. There were 6,380 marriages in London. The four most populous districts of the metropolis are Pancras with about two hundred thousand persons, Kensington, Lambeth, and Marylebone. In Kensington there were 469 marriages; in Pancras, with its larger population, 452; in Marylebone almost the same number, though it contains fewer persons than Pancras by upwards of 30,000; in Lambeth the number was very great, for it rose to 482, the highest returned by the London districts, though its population scarcely exceeds that of Marylebone, and is much less than those of Pancras and Kensington.

The annual marriage-rate in the quarter, viz., proportion per cent. of persons married to population, was, 1·428, the average of ten corresponding quarters, 1855-64, being 1·381. In 1864 (winter quarter) the rate was 1·472.

BIRTHS.—The number of children born in the three months ending 30th June was 192,921, against 188,641 in the same period of last year. In London the births were 26,408 against 25,014; in Lancashire they were 25,635 against 25,467. The counties of Durham and Northumberland exhibit a marked increase. The former with a population in 1861 of 542,125 persons, returns 7,111 births; South Wales containing 699,722 persons in 1861, returns not more than 7,182.

The annual birth-rate in the quarter was 3·691 per cent. against an average of 3·603 in ten previous June quarters. Within this range of comparison it rose in only one instance as high as 3·700. In London the birth-rate was 3·515; in the city of Manchester 3·624; in the borough of Liverpool it was as high as 4·173; in that of Leeds 4·497; and in Glasgow it rose to 4·604.

INCREASE OF POPULATION.—The registers of births record, as has been mentioned, a total of 192,921; the deaths in the same three months are 116,006. The excess of the former over the latter is 76,915, and represents the natural increase of population, which averaged 845 daily.

ENGLAND:—*Annual Rates per Cent. of* PERSONS MARRIED, BIRTHS, *and* DEATHS, *during the* YEARS 1859-65, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1859-65:—*General Percentage Results.*

YEARS	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
Estmtd. Popln. of England *in thousands* in middle of each Year....	20,991	—	20,772	20,554	20,336	20,119	19,903	19,687
Persons Married Per ct.	—	1·663	1·736	1·688	1·614	1·628	1·710	1·704
Births .... ,,	—	3·464	3·561	3·539	3·504	3·461	3·437	3·504
Deaths.... ,,	—	2·216	2·385	2·305	2·147	2·163	2·124	2·239

QUARTERS *of each Calendar Year*, 1859-65.

(I.) PERSONS MARRIED:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	1·428	1·381	1·472	1·408	1·360	1·346	1·422	1·464
June..... ,,	—	1·687	1·724	1·726	1·614	1·678	1·766	1·716
Septmbr. ,,	—	1·605	1·704	1·616	1·582	1·570	1·614	1·602
Decmbr. ,,	—	1·963	2·020	1·996	1·890	1·906	2·012	2·026

(II.) BIRTHS:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	3·768	3·627	3·740	3·691	3·644	3·500	3·707	3·631
June .... ,,	3·691	3·603	3·647	3·700	3·665	3·690	3·512	3·588
Septmbr. ,,	—	3·325	3·447	3·343	3·365	3·388	3·267	3·389
Decmbr. ,,	—	3·297	3·376	3·428	3·350	3·272	3·230	3·414

(III.) DEATHS:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	2·728	2·522	2·773	2·538	2·443	2·453	2·481	2·515
June..... ,,	2·220	2·191	2·260	2·308	2·121	2·147	2·237	2·155
Septmbr. ,,	—	1·972	2·139	2·169	1·800	1·994	1·718	2·097
Decmbr. ,,	—	2·180	2·349	2·213	2·230	2·064	2·043	2·195

From ports in the United Kingdom where there are Government Emigration Officers, there went out in the June quarter 71,087 emigrants,* of whom 52,730 were destined for the United States, 6,943 for British North America, 9,820 for the Australian colonies, and 1,594 for other parts of the world. More than a fourth part of the emigration consisted of persons of English origin; but the number of Irish emigrants was double that of English, and all the former, except a few thousands, went to the United States. The Scotch who left their native country were about 4,600. The emigration to the United States was not quite equal to that of the same quarter in either of the two preceding years; and the numbers who went to other destinations, also showed a decrease.

CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE, *in each of the Nine* QUARTERS *ended 30th June*, 1865.

1	2	3	4	5	6	7	8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Mean Temperature.
			Beef.	Mutton.		In-door.	Out-door.	
1863	£	*s.* *d.*	*d.* *d.* *d.*	*d.* *d.* *d.*	*s.* *s.* *s.*			°
30 June	93⅛	46 2	4¼—6¼ 5¼	4¾—6¾ 5¾	110—130 120	127,852	879,241	53·0
30 Sept.	93	45 7	4½—6¼ 5⅜	4¾—6¾ 5¾	70—105 87	120,189	819,795	58·8
31 Dec.	92⅞	40 6	4—6¼ 5⅛	5—7 6	60—80 70	130,072	804,941	46·8
1864								
31 Mar.	91	40 4	4½—6½ 5½	5½—7 6¼	55—70 62	139,606	855,728	37·9
30 June	91⅝	39 7	4¼—6¼ 5¼	5¼—7 6⅛	40—60 50	122,717	785,825	53·1
30 Sept.	89⅛	42 3	4½—6½ 5½	5½—7 6¼	80—120 100	115,698	739,341	59·4
31 Dec.	89⅝	38 5	4½—7 5⅝	5¼—7¼ 6¼	80—95 87	128,322	771,879	43·7
1865								
31 Mar.	89⅜	38 4	4½—7 5¾	5¼—7¼ 6¼	85—97 91	142,329	813,371	36·5
30 June	90⅝	40 6	4¾—6¾ 5¾	6¼—8½ 7⅜	90—115 102	125,846	776,016	56·2

PRICES, PAUPERISM, AND THE WEATHER.—The average price of wheat, was 40*s.* 6*d.* per quarter; a shilling higher than it was in the June quarter of last

* Return with which the Registrar-General has been favoured by the Emigration Commissioners: of 71,087 emigrants the origin was undistinguished in 1,449 cases, which have been distributed by calculation.

year, but 6*s.* less than it was in the same period of 1863. Beef by the carcase at Newgate and Leadenhall Markets was on an average $5\frac{3}{4}d.$ per lb., and was a halfpenny dearer than in the two previous June quarters. Mutton was $7\frac{3}{8}d.$ per lb.; it was $1\frac{1}{4}d.$ dearer than in the same period of 1864, and nearly 2*d.* dearer than in that of 1863. The average price of best potatoes at the Waterside Market, Southwark, was 102*s.* 6*d.* per ton, being about double the price of the June quarter of 1864, but less than that of 1863.

The average number of paupers relieved in-door was 125,846, which is rather more than in the spring of last year, less than in that of 1863; the number relieved out-door was 776,016, exhibiting a small decrease on the pauperism of 1864, and a very great decrease on that of the previous year, when the number of persons who received relief was greater than in the present year by 100,000.

In his summary of results derived from the copious meteorological details that have been compiled with much care, and are appended to this report, Mr. Glaisher writes that the unusually severe weather of March interrupted agricultural operations and checked vegetation; on 5th April this wintry weather ceased suddenly; and till 10th June, during a period of sixty-seven days, the temperature was, with few exceptions, above the average, the average daily excess being nearly five degrees; and the quarter was closed by a period of twenty days, in which intervals of cold and warm weather succeeded each other, but with a predominance of cold. The high summer temperature of April urged vegetation to rapid growth, and soon effaced the traces of a backward season. Rain, which had been much needed, fell early in May, and in the second week of that month over the whole of the British islands. The mean temperature was above the average in each month, remarkably above it in April and May. The mean temperature of the quarter was 56·2 at Greenwich; and there is no record of any previous instance in which it was so high in the same period of the year. There was 7·2 in. of rain. The fall was deficient in April; above the average in May and June. The air was unusually dry; for though there was a great deal of rain in May, it fell in showers, which were heavy, but of short duration.

Deaths; and the State of the Public Health.—The total number of deaths in the quarter that ended 30th June, was 116,006 against 118,121 and 116,899 in the same three months of 1863 and 1864 respectively. The returns of London in the last three springs discover, as regards absolute numbers, a near approach to identity; but those of the kingdom generally show a decrease in last quarter; Wales, and some northern parts of England, where epidemic diseases have been rife, or active industrial operations have attracted population, being the only important exceptions. The singularly fine weather has exercised a beneficial influence on the public health; and the effect would doubtless have been more marked in the death registers if the preceding March had been less cold and ungenial. The winter months, and especially March, were as remarkable for cold as the late spring season was for heat: and many bronchial affections, which the former period transmitted, ran their course to a fatal termination after the propitious change of weather had begun. The following counties may be mentioned amongst those which exhibit a decrease of deaths in the present returns: Hampshire, Berkshire, Hertfordshire, Oxfordshire, Huntingdonshire, Cambridgeshire, Suffolk, Wiltshire, Cornwall, Staffordshire, Worcestershire, Warwickshire, Leicestershire, Rutlandshire, Cheshire, the East and North Ridings of Yorkshire, Cumberland, and Westmorland. In Lancashire the deaths in the spring quarter of 1863 and 1864 were 16,541 and 16,415; in last quarter 16,806. In the West Riding of Yorkshire they were in the same periods 10,469, 9,991, and 10,431. In South Wales they were 3,871, 4,056, 4,779.

In England the annual rate of mortality for the June quarter was 2·220 per cent. (deaths to 100 persons living) against an average of 2·191 for the corresponding quarter in ten previous years. In 1863 and 1864 the rate was 2·308 and 2·260 per cent.

Average Annual Rate of Mortality to 1,000 *of the Population in the Eleven Divisions of England in the Ten Years* 1851-60 ; *in the Spring, Summer, and Autumn Quarters of* 1864 ; *and in the Winter and Spring Quarters of* 1865.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in					
	Ten Years, 1851-60.	1864.			1865.	
		Spring Quarter.	Summer Quarter.	Autumn Quarter.	Winter Quarter.	Spring Quarter.
I. London	23·63	23·53	24·06	26·12	28·46	23·16
II. South-Eastern counties	19·55	19·41	18·66	19·37	24·25	18·82
III. South Midland „	20·44	21·61	20·43	22·66	25·39	20·02
IV. Eastern counties	20·58	21·25	19·05	20·86	24·47	20·40
V. South-Western counties	20·01	20·96	18·20	20·67	25·20	20·53
VI. West Midland „	22·35	22·32	21·55	23·77	27·15	20·23
VII. North Midland „	21·10	21·45	19·23	20·75	25·73	20·52
VIII. North-Western „	25·51	24·76	23·22	26·34	30·25	24·69
IX. Yorkshire	23·09	24·55	23·66	25·00	28·01	24·83
X. Northern counties	21·99	21·95	21·14	22·46	26·26	22·63
XI. Monmouthshire and Wales	21·28	22·97	20·17	23·59	29·51	24·75

The south-eastern division, embracing Surrey, Kent, Sussex, Hampshire, and Berkshire was the most healthy; for in it the rate of mortality was only 1·882 per cent. The next in degree of health was that which contains the south midland counties, where the mortality was 2·002. In four other divisions, viz., the eastern, south-western, west midland, and north midland counties, it did not rise as high as 2·1 per cent. In the north-western counties (Cheshire and Lancashire), in Yorkshire and Wales, it was but little under 2·5 per cent. The registrars of Welsh districts report measles, scarlatina, and small-pox as diseases that had prevailed in the quarter. In Llantrisaint, of 122 deaths 27 were from measles, 20 from scarlatina, and 16 from small-pox; in the lower sub-district of Merthyr Tydfil, in 200 deaths from all causes, 31 were from scarlatina; in Aberdare, another sub-district of Merthyr Tydfil, 28 cases of small-pox were fatal; in the town of Swansea there were 19 deaths from small-pox, and 23 from measles, out of 251 from all causes; scarlatina had been very prevalent in Brecknock; and in Wrexham nearly a fourth part of the deaths was from measles. Newport in Monmouthshire had been attacked by small-pox in a malignant form; and the same disease had been prevalent and fatal in the Whitehaven district, at Gravesend, Hastings, Swindon, Calne, St. Ives, and Bath. Measles were fatal in Manchester, Wigan, and Oldham; and in the sub-district of Mount Pleasant, Liverpool, out of 850 deaths, 207 were from typhus, 26 from small-pox, and 26 from measles. In Farnham, Surrey, 24 out of 87 deaths were from scarlatina.

In London the total number of deaths was 17,367. The annual rate of mortality for the quarter was 2·316 per cent. In the town of Leeds it was 2·714; in that of Liverpool it was 3·125; in Dublin it was 2·368; in Edinburgh 2·639; in Glasgow 3·065. Of ten large towns in the United Kingdom, Birmingham shows the lowest mortality for last spring: and Bristol in the same table stands in a position not much less favourable.

In the deaths from scarlatina in London there was a decided decrease; they were 385, which is much less than in any June quarter since 1861; in the December quarter of last year they were 1,095. It is satisfactory that typhus has not increased recently, although the decrease is not considerable. In the last quarter of 1864, the deaths from it were 1,064; in the first two quarters of the

present year they were 936 and 700. There were 738 deaths in London from diarrhœa and summer cholera. This complaint, which is commonly so fatal to young children in a more advanced period of the year, appears to have been forced into earlier development by the unusual heat of the season; for in the spring quarter of 1863 and 1864 the numbers referred to it were only 232 and 334. Thus in the present year the previous number has been more than doubled. It is possible that other unusual conditions besides temperature have tended to produce this result; but in present darkness on the nature of those conditions, the fact itself is important, and cannot safely be overlooked, at a time when malignant cholera prevails in a part of Egypt which is in frequent and direct communication with English ports. The same precautionary measures, that are the best preparation against the threatened attack, are also the most useful to repress, if not extirpate, those marauding bands of diseases that always infest within the frontiers, and are not the less dangerous because they excite less alarm by sudden and violent outbreaks. An abundant supply of water is a first necessity for this purpose; and the inhabitants of a town should not be obliged to "fetch it from a distance," which the registrar of Hindley, in the Wigan district, complains that the people there find it necessary to do, though it is a place where collieries and ironworks are in operation.

ANNUAL RATE *of* MORTALITY *per Cent. in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1865-63.

	Area in Statute Acres.	Population Enumerated.		Quarters ending	Annual Rate of Mortality per Cent. in each Quarter of the Years			
		1851.	1861.		1865.	Mean '55-64.	1864.	1863.
In 142 Districts, and 56 Sub-districts, comprising the *Chief Towns*.....	3,287,151	9,155,964	10,930,841	March	2·881	2·703	2·974	2·706
				June....	2·339	2·324	2·369	2·470
				Sept. ..	—	2·192	2·374	2·410
				Dec.....	—	2·430	2·601	2·422
				Year	—	2·412	2·580	2·502
				Year	—	1·987	2·116	2·057
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,037,732	8,771,645	9,135,383	March	2·514	2·313	2·508	2·323
				June...	2·049	2·037	2·110	2·100
				Sept. ..	—	1·714	1·831	1·862
				Dec.....	—	1·885	2·015	1·944

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

In cholera epidemics of past years the seaports of Northumberland and Durham have suffered early and severely.

ENGLAND: — MARRIAGES *Registered in Quarters ended 31st March,* 1865-63; *and* BIRTHS *and* DEATHS *in Quarters ended 30th June,* 1865-63.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	MARRIAGES in Quarters ended 31st March.		
			'65.	'64.	'63.
ENGLD. & WALES.... *Totals*	37,324,883	No. 20,066,224	No. 36,835	No. 37,948	No. 35,528
I. London	77,997	2,803,989	6,380	6,591	6,275
II. South-Eastern	4,065,935	1,847,661	2,771	2,807	2,749
III. South Midland	3,201,290	1,295,497	1,656	1,660	1,587
IV. Eastern	3,214,099	1,142,580	1,479	1,555	1,466
V. South-Western	4,993,660	1,835,714	3,067	3,139	3,180
VI. West Midland	3,865,332	2,436,568	4,278	4,686	4,145
VII. North Midland	3,540,797	1,288,928	1,907	2,113	1,814
VIII. North-Western	2,000,227	2,935,540	6,324	6,234	6,059
IX. Yorkshire	3,654,636	2,015,541	4,279	4,454	3,926
X. Northern	3,492,322	1,151,372	2,472	2,398	2,277
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,222	2,311	2,050

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th June.			DEATHS in Quarters ended 30th June.		
	'65.	'64.	'63.	'65.	'64.	'63.
ENGLD. & WALES.... *Totals*	No. 192,921	No. 188,641	No. 189,340	No. 116,006	No. 116,899	No. 118,121
I. London	26,408	25,014	25,684	17,367	17,346	17,263
II. South-Eastern	15,778	15,508	15,305	9,130	9,300	9,317
III. South Midland	11,839	11,306	11,528	6,598	7,088	6,895
IV. Eastern	10,014	9,752	10,060	5,870	6,100	6,360
V. South-Western	15,201	15,238	15,678	9,465	9,645	10,031
VI. West Midland	24,066	23,841	24,094	12,967	14,126	13,968
VII. North Midland	11,893	11,802	11,954	6,755	7,019	6,985
VIII. North-Western	30,413	30,172	29,967	19,336	19,071	19,473
IX. Yorkshire	21,360	20,753	20,450	13,100	12,802	13,339
X. Northern	13,154	12,457	12,287	6,973	6,646	7,044
XI. Monmthsh. & Wales	12,795	12,798	12,333	8,445	7,756	7,446

REMARKS ON THE WEATHER

DURING THE QUARTER ENDING 30TH JUNE, 1865.

By JAMES GLAISHER, ESQ., F.R.S., *&c., Sec. of the British Meteorological Society.*

The weather in the month of March was of unusual severity for the season, agricultural operations were very much interrupted, and vegetation had made but little progress. On 5th April a sudden change from wintry weather took place, and from this time till 10th June, a period of 67 days, the temperature, with few exceptions of short duration, was above the average, and at times to considerable amounts, the average daily excess of temperature for these 67 days was more than $4\frac{1}{2}^{\circ}$; from 11th June, a period of a few days cold and a few days warm alternately set in, the former somewhat preponderating, the daily deficiency for this period of 20 days averaging less than $\frac{1}{2}^{\circ}$. The sudden change from the low winter temperature on 4th April to high summer temperature at the middle of April caused vegetation to revive very rapidly, and towards the end of the month the very warm temperature stimulated vegetation to a very rapid growth, and effaced every trace of the backward winter season. The fall of rain was small, the sky was mostly clear, and pastures and green crops greatly needed rain. At the beginning of May rain fell, in the second week over the whole of the British islands, and vegetation improved wonderfully; at the end of the month the corn crops were considered fully a fortnight in advance of last year in the corresponding period. In June there were some heavy thunderstorms, and heavy rain fell at different parts of the country; haymaking proceeded satisfactorily. At the end of the quarter the harvest reports represented wheat as promising on heavy soils, while on light soils it is said to be short in quantity; oats in many places have failed; barley looked well, but needed rain; the potato crop continued healthy, but root crops generally were suffering from the want of rain.

The average temperature of these three months was as high as $56\frac{1}{4}^{\circ}$, and there is no instance on record of such a high temperature. The nearest approaches to this value were $55^{\circ}{\cdot}5$ in 1775, $55^{\circ}{\cdot}1$ in 1844, $55^{\circ}{\cdot}7$ in 1846, and $55^{\circ}{\cdot}3$ in 1848.

The degree of humidity of the air in these months was not less remarkable; the air was always dry, the rain fell in heavy showers and in short times, and the air was upon the average 5 parts out of 100 drier than usual.

Notwithstanding the high temperatures, &c., there has not been a single meteorological choleraic symptom shown; there has been no blue mist, the air has been in very general motion, and I have seen none of those conditions so usual during the prevalence of cholera, and there have been none up to the time of writing this, viz., 17th July.

The mean temperature of April was $52^{\circ}{\cdot}3$, being $5^{\circ}{\cdot}7$ *above* the average of the preceding 24 years, and $4^{\circ}{\cdot}1$ above that in 1864.

The mean temperature of May was $56^{\circ}{\cdot}1$, being $3^{\circ}{\cdot}3$ *above* the average of the preceding 24 years, and $2^{\circ}{\cdot}3$ above that in 1864.

The mean temperature of June was $60^{\circ}{\cdot}2$, being $1^{\circ}{\cdot}2$ *above* the average of the preceding 24 years, and $2^{\circ}{\cdot}8$ above that of last year.

The temperature in April was remarkable indeed; there is no instance on record of one so warm; the nearest approach to this high temperature was in 1844, when it was $51^{\circ}{\cdot}7$; the next was in 1821, viz., $50^{\circ}{\cdot}4$; and the only other instance, back

to 1771, in which the mean temperature exceeded 50°, viz., 50°·7, was in the year 1779.

The temperature in May was also remarkable, as we have to go back seventeen years to find one so warm, viz., in the year 1848; but there are ten other instances, going back to 1771, in which the temperature of this month has exceeded 56°.

The usual increase in the mean temperature from March to April is about 5°. In this year, at stations south of lat. 53°, April was from 12° to 17° warmer than March; and at stations north of 53°, the increase was from 8° to 10°. This great increase is very remarkable.

The mean high day temperatures were above their averages to the amounts of 9°·3, 3°·4, and 2°·7 respectively.

The mean low night temperatures were above their averages in April and May to the amounts of 2°·7 and 2°·1 respectively, and below it in June to the amount 0°·2.

The daily range of temperature in April averaged 25° nearly, being nearly 7° greater than the average.

The mean temperature of the air at Greenwich in the three months ending May, constituting the three spring months, was 48°·3, being 1°·9 above the average of the preceding 94 years.

1865.	Temperature of Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames	Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
Months.	Mean.	Diff. from Average of 94 Years.	Diff. from Average of 24 Years.	Mean.	Diff. from Average of 24 Years.	Mean.	Diff. from Average of 24 Years.	Mean.	Diff. from Average of 24 Years.		Mean.	Diff. from Average of 24 Years.	Mean.	Diff. from Average of 24 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Gr.	Gr.
April	52·3	+6·5	+5·7	48·2	+4·7	44·0	+3·8	24·8	+6·6	52·5	·288	+·039	3·3	+0·4
May	56·1	+3·6	+3·2	51·7	+2·5	47·5	+1·9	21·6	+1·4	59·8	·329	+·026	3·6	+0·1
June	60·2	+2·1	+1·2	55·0	+0·4	50·4	−0·3	23·7	+3·0	65·5	·366	−·006	4·1	−0·1
Mean.....	56·2	+4·1	+3·4	51·6	−2·5	47·3	+1·8	23·4	+3·7	59·3	·328	+·020	3·7	+0·1

1865.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
										Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night
Months.	Mean.	Diff. from Average of 24 Years.	Mean.	Diff. from Average of 24 Years.	Mean.	Diff. from Average of 24 Years.	Amnt.	Diff. from Average of 48 Years.		At or below 30°.	Between 30° and 40°.	Above 40°.		
			In.	In.	Gr.	Gr.	In.	In.	Miles.				°	°
April	73	− 6	29·954	+·193	542	− 1	0·4	−1·4	169	2	17	11	26·8	51·1
May	73	− 4	29·768	−·006	534	− 8	4·4	+2·3	211	1	13	17	20·3	52·4
June	70	− 5	30·029	+·242	534	+ 3	2·4	+0·5	181	0	8	22	33·1	59·0
Mean.....	72	− 5	29·917	+·143	537	− 2	Sum 7·2	Sum +1·4	Mean 187	Sum 3	Sum 38	Sum 50	Lowest 20·3	Highst 59·0

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND:—*Meteorological Table, Quarter ended 30th June*, 1865.

1	2	3	4	5	6	7	8	9
Names of Stations.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Range of Temperature in the Quarter.	Mean Monthly Range of Temperature.	Mean Daily Range of Temperature.	*Mean Temperature of the Air.*	Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·741	74·5	37·0	37·5	29·3	21·3	53·3	84
Ventnor	29·805	75·0	40·0	35·0	28·7	11·4	56·9	70
Barnstaple	29·707	90·5	33·5	57·0	43·7	19·8	57·5	78
Royal Observatory	29·770	87·6	31·4	56·2	47·7	23·4	56·2	72
Royston	29·788	90·8	35·0	55·8	53·4	24·7	56·1	71
Lampeter	29·764	91·5	28·0	63·5	51·1	24·5	55·6	78
Diss (Norfolk)	29·713	90·0	37·5	52·5	52·2	26·1	56·5	68
Derby	29·753	84·0	32·0	52·0	41·0	19·2	54·9	72
Liverpool	29·790	77·9	38·0	39·9	31·2	11·6	53·9	78
Wakefield	29·769	84·7	29·0	55·7	45·5	21·3	54·7	74
Stonyhurst	29·722	81·5	30·9	50·6	36·2	17·8	52·6	79
North Shields	29·840	77·0	34·0	43·0	33·9	12·4	49·1	84

10	11	12	13	14	15	16	17	18
	Wind.						Rain.	
Names of Stations.	Mean estimated Strength.	Relative Proportion of				Mean Amount of Cloud.	Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·1	9	10	6	5	3·3	29	5·1
Ventnor	—	3	13	3	11	—	29	4·8
Barnstaple	0·9	6	9	7	8	2·2	26	7·0
Royal Observatory	0·1	7	7	8	8	5·2	25	7·2
Royston	—	10	4	8	8	4·7	25	4·0
Lampeter	0·6	6	7	9	8	5·2	28	7·1
Diss (Norfolk)	0·9	7	7	8	8	4·6	21	3·0
Derby	—	6	8	6	10	—	24	5·4
Liverpool	1·1	9	5	8	8	5·9	31	5·0
Wakefield	1·7	8	7	7	8	5·6	28	4·4
Stonyhurst	0·5	8	7	5	10	6·7	38	8·1
North Shields	2·7	7	7	6	10	6·5	30	6·4

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 30TH JUNE, 1865.

Scotland, for the purposes of Registration, is divided into 1,011 Districts, and this Return comprises the number of BIRTHS, DEATHS, and MARRIAGES entered on the registers of these districts during the quarter ending 30th June, 1865. During that period there have been registered 30,332 births, 17,066 deaths, and 5,698 marriages. From this it appears that births, deaths, and marriages have all been above the average of the corresponding quarter of the ten previous years.

BIRTHS.—30,332 births were registered in Scotland during the second quarter of the year 1865, being in the annual proportion of 386 births in every 10,000 persons of the estimated population. This is a higher birth-rate than Scotland has ever before exhibited during the ten years the Registration Act has been in operation, and is considerably above the average of the corresponding quarter of the ten previous years, which was only at the rate of 370 births in every 10,000 persons of the estimated population.

The town and rural districts showed the usual difference in the proportion of their births. Thus, in the 126 town districts (which embrace all the towns with populations of 2,000 and upwards), 17,924 births were registered; while in the 885 rural districts (embracing the remainder of the population of Scotland), 12,408 births were registered; thus indicating an annual proportion of 428 births in every 10,000 persons in the town districts, but only 339 births in a like population in the rural districts.

TABLE I.—*Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th June, 1865.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9·5						
Northern	6·6	Shetland ...	4·8	Forfar	14·1	Lanark	8·3
North-Western	6·7	Orkney	5·1	Perth	11·8	Linlithgow .	6·8
North-Eastern	12·8	Caithness ...	9·2	Fife	7·7	Edinburgh .	9·4
East Midland ..	11·4	Sutherland...	5·8	Kinross	9·5	Haddington	7·6
West Midland.	8·4	Ross and Cromarty	6·7	Clackmannan	7·5	Berwick	9·2
South-Western	8·1	Inverness	6·8	Stirling	9·4	Peebles.....	11·8
South-Eastern.	8·9	Nairn	7·6	Dumbarton ..	7·8	Selkirk	10·2
Southern	12·5	Elgin	13·1	Argyll	7·4	Roxburgh ..	11·5
		Banff	13·6	Bute	9·0	Dumfries	12·8
		Aberdeen	12·9	Renfrew.....	6·9	Kirkcudbright ..	12·9
		Kincardine...	11·7	Ayr.....	8·8	Wigtown	13·2

Of the 30,332 children born during the quarter, 27,443 were legitimate, and 2,889 illegitimate; being in the proportion of one illegitimate in every 10·4 births, or 9·5 per cent. of the births as illegitimate. The proportion of illegitimate births was, as usual, lower in the town than in the rural districts; though not so strikingly so as during the previous quarter; for while only 9·3 per cent. of the births were illegitimate in the town districts, 9·7 per cent. were illegitimate in the rural

districts. Table I exhibits the proportion of illegitimate births, in the several divisions and counties of Scotland, and generally accords with previous returns, the north-eastern and southern divisions as usual exhibiting the highest proportion of illegitimate births. Thus, while only 6·6 per cent. of the births were illegitimate in the northern, 6·7 per cent. in the north-western, 8·1 per cent. in the south-western, and 8·4 per cent. in the west midland divisions, 12·5 per cent. were illegitimate in the southern, and 12·8 per cent. in the north-eastern divisions.

Of the children born during the quarter, 15,576 were males, and 14,756 females; being in the proportion of 105·5 males for every 100 females at birth.

Deaths.—17,066 deaths were registered in Scotland during the second quarter of the year 1865, being in the annual proportion of 217 deaths in every 10,000 persons of the estimated population. This is a death-rate very slightly above the mean of the second quarter of the ten previous years, which was at the rate of 216 deaths in every 10,000 persons of the estimated population, but is considerably below that of the corresponding quarter of the three previous years, and is below that of England for the same quarter, seeing the English mortality of the second quarter of 1865 was at the rate of 221 deaths in every 10,000 persons of the estimated population, the deaths amounting to 116,006, and the mean population of the year being 20,991,000 persons.

The deaths in the town districts, as usual, greatly exceeded those in the rural districts. Thus, in the 126 town districts, 10,911 deaths were registered; but only 6,155 deaths in the 885 rural districts; indicating an annual proportion of 261 deaths in every 10,000 persons in the town districts, but only 168 deaths in a like population in the rural districts.

Of the deaths, 5,798 were registered in April, 5,931 in May, and 5,337 in June; so that the daily deaths in Scotland amounted to 193 during April, to 191 during May, and to 178 during June.

Table II.—*Number of Births, Deaths, and Marriages in Scotland, and in the Town and Country Districts during the Quarter ending 30th June, 1865, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated, 1865.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,136,057	30,332	3·86	25	2,889	9·5	10·4
126 town districts	1,603,875	1,672,210	17,924	4·28	23	1,682	9·3	10·6
885 rural ,,	1,458,419	1,463,847	12,408	3·39	29	1,207	9·7	10·2

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated, 1865.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,136,057	17,066	2·17	45	5,698	0·72	137
126 town districts	1,603,875	1,672,210	10,911	2·61	38	3,599	0·86	116
885 rural ,,	1,458,419	1,463,847	6,155	1·68	59	2,099	0·56	174

Increase of the Population.—As the births numbered 30,332, and the deaths 17,066, the natural increase of the population during the quarter, through the excess of births over deaths, amounted to 13,266 persons. From a return furnished to the Registrar-General by the Emigration Commissioners, it appears that 71,087 persons emigrated from the ports of Great Britain and Ireland, during the second quarter of the year 1865, of which number 4,614 were ascertained to have been of Scottish origin. If 96 be added to that number as the proportion of those whose origin was not ascertained, the total number of Scotch emigrants during the quarter would amount to 4,710; and that deducted from the excess of births over deaths, would leave 8,556 as the increase of the population during the quarter. This calculation, however, makes no allowance for the large emigration to England, nor for the drafts to the army, navy, and merchant shipping.

Marriages.—5,698 marriages were registered in Scotland during the second quarter of the year 1865, being in the annual proportion of 72 marriages in every 10,000 persons of the estimated population. This is a proportion considerably above the average marriage-rate of the quarter during the ten previous years, which was only at the rate of 69 marriages in every 10,000 persons. It was, however, below the marriage-rate of the corresponding quarter of last year, which was in the proportion of 73 marriages in a like population.

The usual difference in the marriage-rate was observable in the town and rural districts. Thus in the 126 town districts there were registered 3,599 marriages, but only 2,099 marriages in the 885 rural districts; thus indicating a marriage-rate in the towns equal to 86 marriages in every 10,000 persons of the population, but only 56 marriages in a like number of persons in the rural districts.

Of the 5,698 marriages, 1,245 were registered during April, 1,171 during May, and 3,282 during June.

Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Estimated Population, during the Years 1856 *to* 1865.

	1856.		1857.		1858.		1859.		1860.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Year—										
Population.	2,979,855		2,997,210		3,014,565		3,031,921		3,049,277	
Births	101,821	3·41	103,415	3·45	104,018	3·45	106,543	3·51	105,629	3·46
Deaths.....	58,529	1·96	61,906	2·06	63,539	2·10	61,714	2·03	68,170	2·23
Marriages ..	20,740	0·69	21,369	0·71	19,655	0·65	21,201	0·69	21,225	0·69

	1861.		1862.		1863.		1864.		1865.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Year—										
Population	3,066,633		3,083,989		3,101,345		3,118,701		3,136,057	
Births	107,036	3·49	107,138	3·47	109,325	3·52	112,445	3·65	—	—
Deaths.....	62,287	2·03	67,159	2·17	71,421	2·30	74,303	2·35	—	—
Marriages ..	20,828	0·67	20,544	0·66	22,087	0·71	22,675	0·72	—	—

Health of the Population.—The population has been in its usual state of health during the quarter ending 30th June; for though measles, hooping-cough and the various forms of typhus fever have been somewhat more prevalent than usual, the fine weather seems to have abated the virulence of the other diseases, so that the mortality has been but very slightly above the mean of the ten previous years. Fever, however, still lingers over the country; and the abatement which it always undergoes in this country during the finer months of the year should not have the effect of inducing the authorities of the various towns, and other localities where it still prevails, to relax their sanitary precautions. The unusual heat of this summer is almost certain to induce a much more general attack of diarrhœa and autumnal cholera than we have witnessed for many years, and may even bring the epidemic cholera to our shores; and these diseases are very apt to be followed by a renewed outbreak of typhus fever in some of its forms as the temperature decreases. Small-pox still lingers over the country. Measles and hooping-cough have been the prevailing epidemics among children over nearly all Scotland; but in some of the southern counties, scarlatina of a fatal type would appear to have taken the place of measles. Apparently, an unusual number of deaths among the aged have been recorded, probably caused by the sudden invasion of very warm weather after the intense colds of the previous quarter.

Weather.—The weather during the second quarter was everything which could be desired; and has not been so fine, so warm, or so steady for many years. The east winds of March were greatly tempered by the sun's rays during April, and by occasional westerly and south-westerly aerial currents, the meeting of which occasioned frequent dense fogs whenever the easterly current prevailed. On many days during the month of April, while the whole of the east side of the island, from ten to fifteen miles inland, was enveloped in a dense fog, with the wind blowing from the east; the west side of the island, and its central parts, enjoyed clear sunshine, with a westerly or south-westerly breeze. May opened with delightfully mild weather, but from the 8th to the 14th a cold, rainy, misty week occurred, with the wind almost constantly in the east; but from that period to the end of the month the weather was splendid, and the temperature high, with occasional storms of thunder and lightning accompanied by heavy falls of rain. June, again, was unusually warm, with a clear sky, almost no rain, and a very moderate amount of wind.

The mean barometric pressure, corrected and reduced to the sea level, was 30·112 inches during April, 29·836 inches during May, and 30·188 inches during June. The mean temperature of the quarter was 51°·5, being 46°·5 during April, 50°·9 during May, and 57°·1 during June. The mean daily range of temperature amounted to 16°·1 during April, to 14°·0 during May, and to 17°·3 during June. The absolute highest degree of temperature was 77°·0 in April, 81°·3 in May, and 92°·0 in June; and the absolute lowest degree of temperature 23°·0 in April, 24°·9 in May, and 31°·3 in June. The mean degree of humidity of the atmosphere was 83 in April and May, and 81 in June. The mean number of days on which rain fell was 8 in April, 16 in May, and 7 in June; and the mean depth of rain was 0·94 of an inch in April, 3·36 inches in May, and 0·75 of an inch in June. Taking the average of all the stations, winds with an easterly point blew 10 days in April, 11 in May, and 8 in June. Winds with a westerly point blew 13 days in April, 12 in May, and 16 in June.

SCOTLAND:—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended 30th June*, 1865.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1861. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND.....*Totals*	19,639,377	3,062,294	5,698	30,332	17,066
I. Northern	2,261,622	130,422	110	859	495
II. North-Western	4,739,876	167,329	182	1,082	638
III. North-Eastern	2,429,594	366,783	666	3,433	1,697
IV. East Midland	2,790,492	523,822	967	4,819	2,846
V. West Midland	2,693,176	242,507	329	2,204	1,179
VI. South-Western	1,462,397	1,008,253	2,146	12,128	6,897
VII. South-Eastern	1,192,524	408,962	956	4,058	2,308
VIII. Southern	2,069,696	214,216	342	1,749	1,006

No. III.—IRELAND.

MARRIAGES IN THE QUARTER ENDED 31ST MARCH, 1865; AND BIRTHS AND DEATHS IN THE QUARTER ENDED 30TH JUNE, 1865.

This Return includes the MARRIAGES *registered* during January, February, and March; and the births and deaths *registered* during April, May, and June, 1865, in the 719 Registrars' districts of Ireland. The districts are co-extensive with the Dispensary districts of the 163 Poor Law Unions; which latter form the districts of the Superintendent Registrars.

MARRIAGES.—There were 12,266 marriages *registered* in Ireland during the quarter ending 31st March last, being equal to an annual ratio of 1 marriage to every 118, or ·85 per cent. of the population;* of these marriages 10,127 were between Roman Catholics (26 and 27 Vic., cap. 90), and 2,139 between Protestants (7 and 8 Vic., cap. 81).

The number of marriages *registered* in the corresponding quarter of last year was 9,578—7,390 Roman Catholic and 2,188 Protestant—the return for the first quarter of the present year showing an increase of 2,737 in the former, and a decrease of 49 in the latter. The increase in the number of Roman Catholic marriages is probably owing to the fact that the Act 26 and 27 Vic., cap. 90, only came into operation on the 1st January, 1864, and that some marriages were not

* According to the Census of 1861.

registered during the first quarter of that year. The number of marriages in each of the eight divisions, and in each province, may be found on pages 35 and 37.*

Births.—The number of births *registered* during the quarter ending 30th June last amounted to 39,163—20,018 boys and 19,145 girls, or 95·6 of the latter to 100 of the former—affording an annual ratio of 1 in 37, or 2·70 per cent. of the population.† The number of births *registered* in the corresponding quarter of last year was 38,701.

In the following unions, or Superintendent Registrars' districts, the birth-rate exceeded 1 in 30 of the population:†—Belfast, 1 in 22; Castleblayney, 1 in 28; Lisburn, Lurgan, and Newtownards, each 1 in 29; Oughterard 1 in 28; Castletown, 1 in 20; Kenmare, 1 in 23; Dingle, Glin, and Macroom, each 1 in 25; Dunmanway and Millstreet, each 1 in 26; and Killarney, 1 in 29. The first-named five of these unions are situated in the manufacturing districts of Ulster, and the last eight in the province of Munster.

In the following unions or Superintendent Registrars' districts the number of births *registered* did not equal an annual ratio of 1 in 50 of the population:†—Donegal, 1 in 52; Ballyshannon, 1 in 54; Dunshaughlin, 1 in 59; Clones, 1 in 54; Parsonstown, 1 in 55; Donaghmore, 1 in 58; Galway, 1 in 51; Edenderry, Castlebar, Glennamaddy, and Mountbellew, each 1 in 53; Ballina, 1 in 54; Listowel, 1 in 52; *Swineford*, 1 *in* 66; *Letterkenny*, 1 *in* 67; *and Ballyvaghan*, 1 *in* 85.

Deaths.—There were 24,380 deaths *registered* during the quarter—12,166 males and 12,214 females, or 99·6 of the former to 100 of the latter—being equal to an annual ratio of 1 in every 59·5 or 1·68 per cent. of the population.† The number of deaths *registered* during the corresponding quarter of last year was 24,448.

The six unions or Superintendent Registrars' districts in which the death-rate was highest were, Belfast, 1 in 34; Clonmel, 1 in 39; Newtownards, 1 in 40; Carrick-on-Suir and Dublin South, each 1 in 41; and Dungarvan, 1 in 42. In the Metropolitan Union of Dublin North, the death-rate was 1 in 46.

In the following nine unions the deaths *registered* were not equal to an annual ratio of 1 in 100 of the population:†—Corrofin and Skibbereen, each 1 in 103; Ballyvaghan and Castlebar, each 1 in 107; Clones, 1 in 108; Donegal, 1 in 113; Bawnboy, 1 in 114; Glennamaddy, 1 in 120; and Borrisokane, 1 in 123.

Emigration.—The number of persons leaving the ports of Ireland, who stated to the Enumerators "that it was *not their intention to return*," amounted, during the first quarter of 1865, to 15,848; during the second quarter the number was 37,588—20,175 males and 17,413 females—of whom 13,335 left during the month of April, 14,263 in May, and 9,990 in June. The number of emigrants who left during the second quarter of 1864 was 48,802, or 11,214 more than in the second quarter of the present year,

Emigration from Ireland during the Months of April, May, and June, 1865 and 1864.

Months.	Number of Emigrants in						Decrease in 1865 Compared with 1864.		
	1865.			1864.					
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
April	6,982	6,353	13,335	10,853	8,519	19,372	3,871	2,166	6,037
May	7,695	6,568	14,263	9,364	7,807	17,171	1,669	1,239	2,908
June	5,498	4,492	9,990	6,529	5,730	12,259	1,031	1,238	2,269
Total ..	20,175	17,413	37,588	26,746	22,056	48,802	6,571	4,643	11,214

* In the original return. † According to the Census of 1861.

Decrease of the Population.—The number of emigrants who left Ireland during the first quarter of the present year, was more by 6,864 than the excess of births over deaths. The number of births *registered* during the last quarter, as already stated, amounted to 39,163 and the deaths to 24,380 showing an excess of 14,783 births over deaths, which, if deducted from the number of emigrants, would show a further reduction in the population of 22,805 or a diminution during the first six months of the present year of 29,669 persons.

Prices of Provisions and Pauperism.—Sixpence was the price of the 4-lb. loaf in Dublin during each week of the second quarter of 1865 and 1864. The average price of oatmeal per cwt. during the past quarter was 14*s.* 1*d.*, the prices being very uniform throughout each week of the quarter; during the corresponding quarter of 1864, the average price was but 10*s.* 6*d.* The average prices per cwt. of potatoes ranged from 3*s.* 2*d.* to 3*s.* 11*d.*; in the corresponding quarter of last year they were somewhat lower, viz., 2s. 11*d.* to 3*s.* 8*d.* Beef maintained a high price throughout the quarter, ranging from 55*s.* to 67*s.* 6*d.* per cwt., against 53*s.* to 65*s.* 6*d.* during the corresponding period of 1864.

The number of persons in Ireland receiving in-door relief on Saturdays during the second quarter of 1865, averaged 54,852 being 3,115 less than the average number in the corresponding period of 1864. The number relieved on the last day of the first week of the second quarter of 1865 was 60,100 which gradually decreased to 50,670 which was the number on Saturday, 1st July last. The average number of persons in receipt of out-door relief was greater during the second quarter of 1865, than in the corresponding period of 1864; the respectiye numbers being 10,565 and 9,149. Of the persons receiving in-door relief during the second quarter of 1865, ·9 per cent. were located in blind and deaf and dumb asylums and extern hospitals. In the quarter ending 2nd July, 1864, the per-centage was ·8.

Health of the People.—The health of the people was satisfactory throughout the quarter, owing to comparative freedom from epidemical diseases.

Small-pox appeared in a few districts. The beneficial effects of vaccination are well illustrated by the following notes:—the registrar of Crumlin district, in the union of Antrim, remarks:—"there were a good many cases of small-pox in the district, but in *no case was the disease fatal or even severe where the patient had been previously vaccinated*, and in every instance those parties who had been re-vaccinated lately escaped the disease altogether, although in several cases members of the same family were ill of small-pox at the time;" eight of the 32 deaths registered in the Clonmany district, in the union of Inishowen, were caused by this disease; the registrar reports that 7 of the persons had not been vaccinated, and that the remaining case was accompanied by acute bronchitis. Four deaths from this cause occurred in the Glendermot district of the Londonderry union; and 4 deaths occurred in the Cork north city district—the persons had not been vaccinated.

Diphtheria prevailed in some of the districts in the north-eastern and north-western divisions. Three deaths resulted from this cause in the registrar's district of Antrim. There were 2 deaths from it in the district of Tanderagee, in the union of Banbridge. It is reported to have been epidemic at Bushmills, in the union of Coleraine; 4 deaths from it were there registered. Four deaths from this disease occurred in Coal Island, Dungannon union, and 4 in Glenavy, in the union of Lisburn.

Deaths from scarlatina occurred in most of the districts. It was particularly fatal throughout the western and south-western divisions.

Fever is reported to have been very prevalent at Carrick-on-Suir; at Ballintra, in Ballyshannon; and at Killeter, in Castlederg. It was also prevalent in the district of Fanad, in Millford; the registrar states that it was imported from Glasgow by labourers.

The registrar of the Dromore district, Union of Banbridge, states that of the 38 deaths registered during the quarter, 16 were caused by consumption—a disease which he attributes to want of pure air in the dwellings of the people; he suggests the passing of a "Compulsory Ventilation Act."

It is gratifying to observe that some of the registrars have been able to report improvements in the sanitary condition of their districts; amongst those districts may be mentioned Lisburn; Moynalty, in the union of Kells; Glengarriff, in Bantry union; Ballincollig, in Cork union; portions of Cork city; Maguiresbridge, in Lisnaskea, Galway, &c. On the other hand a long list of places is to be found in the notes, concerning which the registrars felt it their duty to complain; amongst these may be noticed—Portglenone, in the union of Ballymena, "the weavers' shops being often as damp as ill-drained cellars, and very frequently occupied as sleeping-rooms;" the village of Legoniel, in the registrar's district of Shankill, union of Belfast; Hillsborough, in Lisburn; Newtownards; Fintona, in Omagh, in which, the registrar reports, "3 deaths from fever occurred in one house where the sanitary arrangements were defective;" Ballymote, in Sligo, the registrar stating that "the sanitary arrangements of both town and district are in total neglect for want of proper authorities to look after such arrangements;" Carlingford, in Dundalk, the registrar remarking on the non-observance of the "Nuisances Removal Act;" Stillorgan, in Rathdown, in which the village of Newtownpark is stated to be defective in drainage and sewage; Carrick-on-Suir, with regard to which it is stated, "the sanitary condition of this town is in a very bad state, it is in a low position, and very much in need of proper sewage; some of the houses are over-crowded and badly ventilated;" Kilmeadan, in Waterford, in which a prevalence of typhus fever is attributed to the noxious vapours given off from the cesspools opposite the doors of the houses.

The registrar of No. 7 District, Cork city, complains of the non-removal of the pent-up, decaying, animal matter in the several lanes of the city in his district, although brought, by him, under the notice of the Corporation. The registrar of the Bangor district, in Belmullet union, says, "11 deaths in the register are ascribed to searlatina and its consequences; it is still lurking about this district, owing, I believe, to the filthy state in which the people here keep their houses;" and the registrar of Milltown Malbay, in Ennistimon, states that between 50 and 60 cases of "pythogenic fever" visited his district, and that he "failed in no instance to trace the cause to defective sanitary arrangements in the sewage about the houses or the wells from which their water supply was drawn."

It is to be hoped that since the registrars wrote these notes of complaint, the alarm which the approach of cholera (at present visiting the confines of Southern Europe) has excited, may have induced the responsible parties to have these several causes of complaint removed, for they cannot too well remember the undoubted fact, that to neglect sanitary arrangements is to encourage this dread disease.

The Weather.—The following meteorological observations, taken at the Ordnance Survey Office,* Phœnix Park, Dublin, during the second quarter of the year 1865, have been furnished by Captain Wilkinson, R.E., by direction of the Superintendent of the Ordnance Survey.

The mean height of the barometer during the quarter was 29·916 inches (in the second quarter of last year it was 29·871 inches); the highest reading (30·378 inches) was on the 13th June, at 9·30 A.M., wind N.; and the lowest (29·223 inches) on the 29th May, at 9·30 P.M., wind S.S.W.

The mean temperature of the air during the quarter was 54·8° (in the corresponding quarter of last year it was 53·6°); the maximum registered by the thermometer was 83·9°; and the minimum was 31·2°. The temperature on the the grass was below 32° on 4 nights only, during the quarter, viz.:—1st, 10th, 15th and 24th April.

The rain-fall during the quarter ending 30th June last measured 5·816 inches, it was only 4·083 inches in the corresponding portion of last year. The greatest rain-fall was in the month of May, when 3·578 inches were registered.

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* Latitude, 53° 21′ 44″·65 north. Longitude, 6° 21′ 6″·35 west. Height above the sea, 158·8 feet. From the 1st January, 1865, inclusive, the barometer has been corrected for altitude, as well as reduced to 32° Fahrenheit.

The wind blew on 15 days from N.E.; on as many as 22 days from E.; on 16 days from S.W.; and on 17 days from W., at 9·30 A.M.

Meteorological Observations taken at the Ordnance Survey Office, Phœnix Park, Dublin.

Months.	Barometer.*			Thermometer.			Rain-fall.
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	
	Inches.	Inches.	Inches.	°	°	°	Inches.
April, 1864	30·166	29·425	29·895	69·1	29·0	50·1	·792
,, '65	30·202	29·520	29·974	68·9	31·2	50·2	1·304
May, 1864	30·113	29·502	29·870	79·0	31·8	54·4	1·730
,, '65	30·176	29·223	29·695	72·9	37·8	53·4	3·578
June, 1864	30·126	29·202	29·749	73·7	33·2	56·4	1·561
,, '65	30·378	29·328	30·078	83·9	40·0	60·9	·934
							Total
Mean of 2nd quarter, 1864	30·135	29·376	29·838	73·9	31·3	53·6	4·083
,, '65	30·252	29·357	29·916	75·2	36·3	54·8	5·816

Months.	Direction of the Wind at 9·30 A.M. — Number of Days on which the Wind blew from the								Calm.
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
April, 1864	1	4	8	—	2	6	7	2	—
,, '65	1	9	9	—	2	4	3	1	1
May, 1864	2	2	8	2	1	5	6	5	—
,, '65	4	3	5	3	3	10	3	—	—
June, 1864	3	—	1	1	1	10	13	—	1
,, '65	2	3	8	3	—	2	11	1	—
Total of 2nd quarter, 1864	6	6	17	3	4	21	26	7	1
,, '65	7	15	22	6	5	16	17	2	1

* See note on foregoing page.

MARRIAGES.—The number of marriages (2,812) registered in the south-western division during the quarter ending 31st March last, represents an annual ratio of 1 marriage to every 76 of the population.* This very high rate is owing to the custom which prevails amongst the Roman Catholic population, of having a large proportion of the marriages of the year celebrated immediately before the commencement of the Lenten season. The annual ratio afforded by the number of marriages registered in this division during the last quarter of the year 1864 was only 1 in every 308 of the population.* In the western division the marriages registered in the first quarter of the present year equalled an annual ratio of 1 in

* According to the Census of 1861.

every 88 of the population * against a ratio of but 1 in 402 in the last quarter of 1864.

The eastern division is that in which the marriages registered during the quarter ending 31st March last afford the lowest annual ratio, namely, 1 in every 175 of the population.* The number of marriages registered in this division during the quarter ending 31st December, 1864, equalled an annual ratio of 1 in every 177.

Births.—The birth-rate during the past quarter, was highest in the north-eastern division and lowest in the western division, the annual ratios represented in those divisions being, respectively 1 in 32 and 1 in 44 of the population.* The number of births registered in each division varies but little from the number registered in the corresponding quarter of 1864, when the annual ratios ranged from 1 in 32 in the south-western division to 1 in 45 in the north-western.

Although the divisions do not, in any instance, occupy the same position as to numerical order in the two quarters, yet the difference of ratio in each case is so trifling as not to call for special remark.

Divisions.	Area in Statute Acres.	Population in 1861.	March Quarter, 1865. — Marriages.	June Quarter, 1865. Births.	June Quarter, 1865. Deaths.
I. North-Eastern	2,328,305	1,124,041	1,742	8,845	5,514
II. North-Western	2,392,501	574,745	1,010	3,510	2,169
III. Eastern	1,993,016	829,569	1,183	5,632	4,163
IV. North Midland	2,019,408	575,289	1,068	3,531	2,042
V. South Midland	2,361,709	515,272	901	3,022	2,018
VI. Western	4,088,459	822,878	2,346	4,705	2,680
VII. South-Eastern	1,826,172	500,957	1,204	3,381	2,364
VIII. South-Western	3,313,071	855,813	2,812	6,537	3,430
Total of Ireland...	20,322,641	5,798,967	12,266	39,163	24,380

No. IV.—GREAT BRITAIN AND IRELAND.

Summary *of* Marriages, *in the Quarter ended* 31*st March*, 1865; *and* Births *and* Deaths, *in the Quarter ended* 30*th June*, 1865.

COUNTRIES.	Area in Statute Acres.	Population, 1861. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
England and Wales	37,324,883	20,066,224	36,835	192,921	116,006
Scotland	19,639,377	3,062,294	5,407	30,332	17,066
Ireland	20,322,641	5,798,967	12,266	39,163	24,380
Great Britain and Ireland	77,286,901	28,927,485	54,508	262,416	157,452

* According to the Census of 1861.

Trade of United Kingdom, 1865-64-63.—*Distribution of* **Exports** *from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of* **Imports** *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Three Months.					
	1865.		1864.		1863.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	*Exports to*
I.—Foreign Countries:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	1,871,	312,	2,712,	450,	1,840,	311,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	4,952,	4,878,	5,326,	4,834,	4,295,	3,932,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	7,652,	3,767,	8,367,	3,544,	7,211,	3,778,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	684,	2,071,	741,	2,005,	984,	1,789,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	6,785,	3,189,	5,830,	3,306,	5,471,	2,181,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	51,	52,	93,	38,	89,	18,
Western Africa	223,	130,	167,	150,	302,	202,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	42,	15,	29,	10,	3,	16,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	508,	481,	67,	458,	408,	127,
South Sea Islands	8,	—	—	18,	—	—
China, including Hong Kong	2,485,	1,447,	3,781,	1,099,	5,125,	755,
United States of America	1,926,	3,277,	3,578,	6,908,	4,360,	4,303,
Mexico and Central America	995,	601,	828,	276,	400,	394,
Foreign West Indies and Hayti	680,	913,	415,	710,	655,	624,
South America (Northern), New Granada, Venezuela, and Ecuador	252,	713,	369,	517,	188,	373,
,, (Pacific), Peru, Bolivia, Chili, and Patagonia	1,108,	828,	1,119,	573,	1,154,	486,
,, (Atlantic) Brazil, Uruguay, and Buenos Ayres	1,736,	1,982,	1,536,	1,952,	1,265,	1,138,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	—	—	3,	11,	—	5,
Total.—Foreign Countries	31,958,	24,656,	34,961,	26,859,	33,750,	20,432,
II.—British Possessions:						
British India, Ceylon, and Singapore	4,549,	5,548,	6,595,	4,906,	5,379,	2,883,
Austral. Cols.—New South Wales and Victoria	892,	1,923,	404,	1,541,	778,	1,761,
,, ,, So. Aus., W. Aus., Tasm., and N. Zea.	223,	839,	286,	692,	114,	605,
British North America	492,	628,	671,	800,	509,	521,
,, W. Indies with Btsh. Guiana & Honduras	1,712,	870,	1,786,	881,	953,	638,
Cape and Natal	383,	661,	306,	485,	487,	338,
Brt. W. Co. of Af., Ascension and St. Helena	122,	102,	57,	73,	16,	92,
Mauritius	360,	192,	391,	146,	779,	98,
Channel Islands	95,	217,	153,	284,	122,	193,
Total.—British Possessions	8,828,	10,980,	10,649,	9,808,	9,137,	7,129,
General Total.....£	40,786,	35,636,	45,610,	36,667,	42,887,	27,561,

IMPORTS. — (United Kingdom.) — First Five Months (*January — May*), 1865-64-63-62-61.—*Computed Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Five Months.) [000's omitted.] Foreign Articles Imported.		1865.	1864.	1863.	1862.	1861.
		£	£	£	£	£
Raw Matls.—*Textile.*	Cotton Wool	17,183,	29,341,	13,924,	5,702,	18,909,
	Wool (Sheep's)..	4,704,	4,211,	3,686,	3,268,	2,849,
	Silk	5,734,	4,679,	6,620,	6,162,	4,184,
	Flax	876,	1,936,	1,050,	1,050,	641,
	Hemp	560,	1,579,	874,	524,	358,
	Indigo	602,	586,	767,	734,	425,
		29,659,	42,332,	26,921,	17,440,	27,366,
,, ,, *Various.*	Hides	693,	694,	804,	814,	638,
	Oils	1,105,	911,	1,377,	1,128,	976,
	Metals	1,441,	1,626,	1,378,	1,490,	1,055,
	Tallow	394,	382,	392,	487,	569,
	Timber.....	1,572,	1,832,	1,858,	1,439,	1,413,
		5,205,	5,445,	5,809,	5,358,	4,651,
,, ,, *Agricltl.*	Guano	865,	453,	1,167,	315,	879,
	Seeds	1,162,	1,485,	1,085,	776,	968,
		2,027,	1,938,	2,252,	1,091,	1,847,
Tropical,&c.,Produce.	Tea	4,008,	4,272,	4,907,	4,471,	3,435,
	Coffee	1,153,	1,079,	1,200,	926,	669,
	Sugar & Molasses	3,612,	4,829,	5,066,	4,756,	4,766,
	Tobacco	1,003,	910,	650,	370,	465,
	Rice	201,	273,	416,	500,	523,
	Fruits	181,	105,	105,	127,	312,
	Wines	1,494,	2,318,	1,816,	1,494,	1,816,
	Spirits	628,	1,018,	823,	770,	649,
		12,280,	14,804,	14,983,	13,414,	12,635,
Food	Grain and Meal..	5,704,	7,241,	10,116,	12,836,	15,981,
	Provisions	3,473,	3,363,	3,011,	3,208,	2,673,
		9,177,	10,604,	13,127,	16,044,	18,654,
Remainder of Enumerated Articles		1,707,	1,989,	1,702,	1,314,	1,307,
Total Enumerated Imports....		60,055,	77,112,	64,794,	54,661,	66,460,
Add for Unenumerated Imports (say)		15,014,	19,278,	16,198,	13,665,	16,615,
Total Imports.....		75,069,	96,390,	80,992,	68,326,	83,075,

EXPORTS. — (United Kingdom.) — First Six Months (*January — June*), 1865-64-63-62-61.—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(First Six Months.) [000's omitted.] British Produce, &c., Exported.		1865.	1864.	1863.	1862.	1861.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	21,630,	22,401,	15,542,	15,431,	18,894,
	,, Yarn.....	3,959,	4,598,	2,967,	3,295,	4,458,
	Woollen Manufactures	8,034,	9,108,	6,084,	5,600,	4,961,
	,, Yarn	2,436,	2,576,	2,213,	1,573,	1,640,
	Silk Manufactures	901,	1,029,	874,	1,001,	1,024,
	,, Yarn.....	128,	129,	157,	161,	134,
	Linen Manufactures....	4,056,	4,085,	2,903,	2,255,	2,039,
	,, Yarn.....	1,069,	1,480,	1,114,	840,	773,
		42,213,	45,406,	31,854,	30,156,	33,923,
,, *Sewed.*	Apparel	1,171,	1,136,	1,172.	1,033,	951,
	Haberdy. and Mllnry.	2,133,	2,414,	1,817,	1,592,	1,689,
		3,304,	3,550,	2,989,	2,625,	2,640,
Metals	Hardware.....	1,989,	1,958,	1,618,	1,475,	1,640,
	Machinery	2,593,	2,060,	1,884,	1,821,	1,905,
	Iron	5,829,	6,997,	5,917,	5,071,	5,256,
	Copper and Brass.....	1,614,	1,543,	1,963,	1,293,	1,112,
	Lead and Tin	1,282,	1,567,	1,377,	1,347,	910,
	Coals and Culm	2,055,	1,940,	1,726,	1,720,	1,727,
		15,362,	16,065,	14,485,	12,727,	12,550,
Ceramic Manufcts.	Earthenware and Glass	1,055,	1,042,	951,	825,	885,
Indigenous Mnfrs.	Beer and Ale	1,210,	940,	887,	814,	830,
	Butter	134,	148,	232,	150,	252,
	Cheese	47,	78,	67,	58,	62,
	Candles	46,	63,	97,	112,	135,
	Salt	97,	144,	142,	152,	209,
	Spirits	129,	295,	205,	150,	178,
	Soda.....	514,	460,	434,	411,	269,
		2,177,	2,128,	2,064,	1,847,	1,935,
Various Manufcts.	Books, Printed.....	213,	211,	198,	189,	203,
	Furniture.....	148,	105,	134,	107,	96,
	Leather Manufactures	1,197,	1,088,	1,044,	1,269,	945,
	Soap.....	85,	109,	120,	110,	116,
	Plate and Watches	195,	196,	224,	214,	204,
	Stationery..... ..	188,	160,	143,	127,	299,
		2,026,	1,869,	1,863,	2,016,	1,863,
Remainder of Enumerated Articles		4,449,	4,374,	3,798,	3,531,	1,890,
Unenumerated Articles		3,542,	3,613,	4,010,	3,588,	4,457,
Total Exports		74,128,	78,047,	62,014,	57,315,	60,143,

SHIPPING. — FOREIGN TRADE. — (United Kingdom.) — First Six Months (*January—June*), 1865-64-63-62.—*Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.*

(First Six Months.)	1865.			1864.		1863.		1862.	
ENTERED:—	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
Vessels belonging to—	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	151	55,	364	255	89,	135	44,	149	47,
Sweden	385	64,	166	522	82,	458	73,	367	63,
Norway	1,420	303,	213	1,481	297,	1,416	293,	1,125	212,
Denmark	942	95,	101	1,332	126,	1,474	139,	1,053	103,
Prussia and Ger. Sts.	1,508	345,	229	800	216,	1,754	416,	1,459	366,
Holland and Belgium	958	128,	134	892	121,	843	117,	796	107,
France	1,401	123,	88	1,217	98,	1,417	118,	838	70,
Spain and Portugal	218	69,	317	215	61,	192	59,	184	55,
Italy & other Eupn. Sts.	411	119,	289	226	66,	225	68,	300	91,
United States	117	127,	1,085	202	232,	395	406,	561	480,
All other States	15	6,	400	7	3,	9	3,	8	3,
United Kingdm. & Depds.	7,526	1,434,	191	7,149	1,391,	8,318	1,736,	6,840	1,597,
	10,514	3,260,	310	10,552	3,255,	10,170	3,034,	9,098	2,720,
Totals Entered	18,040	4,694,	260	17,701	4,646,	18,488	4,770,	15,938	4,317,
CLEARED:—									
Russia	196	77,	392	229	95,	161	53,	170	55,
Sweden	348	62,	178	470	77,	429	73,	372	70,
Norway	933	196,	210	1,103	213,	875	163,	914	171,
Denmark	1,013	106,	105	1,347	129,	1,541	146,	1,273	124,
Prussia and Ger. Sts.	2,007	429,	214	1,150	275,	2,394	488,	2,194	437,
Holland and Belgium	1,081	164,	152	817	126,	901	139,	1,082	164,
France	2,009	204,	102	2,286	226,	2,256	217,	2,458	243,
Spain and Portugal	192	61,	318	196	58,	175	59,	187	59,
Italy & other Eupn. Sts.	538	180,	335	418	135,	302	96,	306	94,
United States	158	156,	987	213	236,	348	353,	518	447,
All other States	13	4,	308	14	6,	11	4,	17	8,
United Kingdm. & Depds.	8,488	1,639,	193	8,243	1,576,	9,393	1,791,	9,491	1,872,
	13,734	4,228,	308	14,068	4,214,	13,816	3,827,	13,261	3,612,
Totals Cleared	22,222	5,867,	264	22,311	5,790,	23,209	5,618,	22,752	5,484,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — *Computed Real Value for the* First Six Months (*January—June*), 1865-64-63.

[000's omitted.]

(First Six Months.)	1865.		1864.		1863.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	1,289,	—	1,817,	—	2,885,	—
So. Amca. and W. Indies	1,567,	2,855,	2,670,	3,386,	2,163,	3,580,
United States and Cal.	2,882,	41,	4,213,	54,	3,491,	527,
	5,738,	2,896,	8,700,	3,440,	8,539,	4,107,
France	266,	425,	113,	756,	179,	483,
Hanse Towns, Holl. & Belg.	110,	35,	197,	1,129,	252,	895,
Prtgl., Spain, and Gbrltr.	555,	34,	30,	51,	8,	43,
Mlta., Trky., and Egypt	261,	—	1,	1,	115,	3,
China	—	—	—	—	—	—
West Coast of Africa	53,	11,	47,	8,	38,	2,
All other Countries	208,	31,	151,	56,	605,	61,
Totals Imported	7,191,	3,432,	9,239,	5,441,	9,736,	5,594,
Exported to:—						
France	1,848,	336,	3,922,	1,013,	2,264,	550,
Hanse Towns, Holl. & Belg.	229,	1,512,	67,	469,	988,	535,
Prtgl., Spain, and Gbrltr.	781,	—	792,	26,	1,438,	—
	2,858,	1,848,	4,781,	1,508,	4,690,	1,085,
Ind. and China (viâ Egypt)	165,	1,024,	1,356,	3,477,	956	4,487,
Danish West Indies	—	—	—	—	—	—
United States	18,	—	181,	5,	34,	—
South Africa	—	—	58,	3,	118,	62,
Mauritius	—	—	—	—	—	—
Brazil	264,	54,	882,	88,	1,009,	42,
All other Countries	225,	40,	321,	77,	1,846,	51,
Totals Exported	3,530,	2,966,	7,579,	5,158,	8,653,	5,727,
Excess of *Imports*	3,668,	466,	1,660,	283,	1,083,	—
,, Exports	—	—	—	—	—	133,

REVENUE.—(United Kingdom.)—30th June, 1865-64-63-62.

Net Produce in Years *and* Quarters *ended* 30th June, 1865-64-63-62.

[000's omitted.]

QUARTERS, ended 30th June.	1865.	1864.	1865.		Corresponding Quarters.	
			Less.	More.	1863.	1862.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	5,178,	5,446,	,268,	—	5,857,	5,791,
Excise	4,865,	4,864,	—	1,	4,405,	4,886,
Stamps	2,490,	2,539,	49,	—	2,394,	2,253,
Taxes	1,407,	1,432,	25,	—	1,390,	1,357,
Post Office	970,	960,	—	10,	950,	850,
	14,910,	15,241,	,342,	11,	14,996,	15,137,
Property Tax	2,210,	2,469,	,259,	—	2,918,	2,772,
	17,120,	17,710,	,601,	11,	17,914,	17,909,
Crown Lands	70,	69,	—	1,	68,	68,
Miscellaneous	359,	495,	,136,	—	508,	433,
Totals	17,549,	18,274,	,737,	12,	18,490,	18,410,
			Net Decr. £724,680			

YEARS, ended 30th June.	1865.	1864.	1865.		Corresponding Years.	
			Less.	More.	1863.	1862.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	22,304,	22,821,	,517,	—	24,100,	23,644,
Excise	19,559,	18,666,	—	,893,	16,674,	18,047,
Stamps	9,481,	9,462,	—	19,	9,135,	8,658,
Taxes	3,267,	3,260,	—	7,	3,183,	3,154,
Post Office	4,110,	3,820,	—	,290,	3,750,	3,535,
	58,721,	58,029,	,517,	1,209,	56,842,	57,038,
Property Tax	7,699,	8,635,	,936,	—	10,713,	10,549,
	66,420,	66,664,	1,453,	1,209,	67,555,	67,587,
Crown Lands	311,	306,	—	5,	301,	296,
Miscellaneous	2,858,	3,023,	165,		2,828,	1,803,
Totals	69,589,	69,993,	1,618,	1,214,	70,684,	69,686,
			Net Decr. £404,203			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH JUNE, 1865:—
APPLICATION.

An Account showing the REVENUE *and other* RECEIPTS *of the* QUARTER *ended 30th June,* 1865 ; *the* APPLICATION *of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.*

Received:—

		£
Surplus Balance beyond the Charge of the *Consolidated Fund* for the Quarter ended 31st March, 1865, viz.:—		
Great Britain	—	
Ireland	£632,574	
		632,574
Income received in the Quarter ended 30th June, 1865, as shown in Account I		17,549,520
Amount received in the Quarter ended 30th June, 1865, in repayment of Advances for Public Works, &c.		581,239
		£18,763,333
Balance, being the Deficiency on 30th June, 1865, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other charges payable in the Quarter to 30th September, 1865, and for which Exchequer Bills (Deficiency) will be issued in that Quarter		1,269,873
		£20,033,206

Paid:—

		£
Amount of Deficiency Bills Issued in the Quarter to 30th June, 1865, for the charge of the Consolidated Fund in Great Britain on 31st March, 1865	£298,714 11	
Deduct—Redeemed by Sinking Fund in Quarter to 30th June, 1865	298,714 11	
Amount applied out of the Income to *Supply Services* in the Quarter ended 30th June, 1865		10,622,279
Charge of the *Consolidated Fund* for the Quarter ended 30th June, 1865, viz.:—		
Interest of the Permanent Debt	£6,250,311	
Terminable Debt	318,140	
Principal of Exchequer Bills	15,100	
Interest of „ „	78,022	
„ Deficiency „	—	
The Civil List	102,337	
Other Charges on Consolidated Fund	484,915	
Advances for Public Works, &c.	528,169	
Sinking Fund	807,808	
		8,584,802
Surplus Balance in Ireland beyond the Charge of the Consolidated Fund in Ireland for the Quarter ended 30th June, 1865		826,125
		£20,033,206

CORN.—*Gazette Average Prices* (England and Wales), *Second Quarter of* 1865.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1865.	Weekly Average. (Per Impl. Quarter.) Wheat.	Barley.	Oats.
	s. *d.*	*s.* *d.*	*s.* *d.*
April 1	38 11	28 11	21 2
„ 8	39 8	29 5	21 8
„ 15	40 1	29 6	22 1
„ 22	39 7	30 –	22 7
„ 29	39 5	30 –	22 7
Average for April	39 6	29 6	22 –
May 6	39 10	29 9	23 5
„ 13	40 11	29 7	23 3
„ 20	41 8	29 9	22 9
„ 27	41 9	29 1	23 1
Average for May	41 –	29 6	23 1
June 3	41 11	29 1	22 8
„ 10	41 5	28 8	23 –
„ 17	41 1	27 3	23 8
„ 24	41 3	27 5	23 3
Average for June	41 5	28 1	23 1
Average for the quarter	40 6	29 1	22 8

RAILWAYS.—Prices, *April—June;—and* Traffic, *Jan.—June,* 1865.

Total Capital Expended Mlns.	Railway.	For the (£100). Price on 1st June.	1st May.	1st April.	Miles Open. '65.	'64.	Total Traffic first 26 Weeks. (000's omitted.) '65.	'64.	Traffic pr. Mile pr. Wk. 26 Weeks. '65.	'64.	Dividends per Cent. for Half Years. 31 Dec. '64.	30 Jun. '64.	31 Dec. '63.
£					No.	No.	£	£	£	£	*s.* *d.*	*s.* *d.*	*s.* *d.*
51,7	Lond. & N. Westn.	123¾	123	119¾	1,274	1,253	2,764,	2,646,	93	92	70 –	57 6	60 –
45,0	Great Western	74	74¾	75¼	1,280	1,236	1,775,	1,729,	60	62	32 6	30 –	30 –
16,9	„ Northern....	132	133	131½	404	365	886,	819,	88	90	87 6	55 –	87 6
22,4	„ Eastern	47½	47½	48	688	663	814,	783,	47	50	25 –	12 6	25 –
13,0	Brighton	108	108	108	272	267	493,	454,	85	80	60 –	50 –	50 –
17,6	South-Eastern	86	86¾	85	308	306	588,	554,	99	99	57 6	42 6	58 4
15,3	„ Western	99	98	96½	490	454	583,	558,	61	62	55 –	45 –	55 –
181,9		95¾	96	95	4,716	4,544	7,903,	7,543,	76	76	55 4	41 9	52 3
24,5	Midland.....	136	135¾	134½	663	641	1,186,	1,146,	73	73	77 –	70 –	70 –
20,4	Lancsh. and York.	123	123	118¼	403	403	1,008,	982,	110	102	60 –	57 6	47 6
13,3	Sheffield and Man.	62½	62½	61	246	242	465,	454,	75	80	25 –	27 6	15 –
31,8	North-Eastern	111	111½	110	1,110	1,095	1,517,	1,453,	62	60	62 6	55 –	55 –
90,0		108	108	106	2,422	2,381	4,176,	4,035,	80	79	56 1	52 6	46 10
10,5	Caledonian	133	133	131	281	281	505,	476,	78	73	72 6	65 –	62 6
5,7	Gt. S. & Wn. Irlnd.	88	88	89	387	387	213,	209,	25	19	45 –	45 –	45 –
288,1	*Gen. aver.*....	101¾	101¾	100½	7,806	7,593	12,797,	12,263,	74	72	56 1	47 1	50 10

Consols.—Money Prices, 1*st April*, 89⅞ to 90 (de.).—1*st May*, 90¾ to ⅞ (de.).—1*st June*, 91⅛ to ¼.
Exchequer Bills.—1*st April*, 3*s.* to 6*s.* pm.—1*st May*, 4*s.* to 7*s.* pm.—1*st June*, 15*s.* to 20*s.* pm.

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), *for Wednesday in each Week, during the* Second Quarter (*April—June*) *of* 1865.

[0,000's omitted.]

1	2	3	4	5	6	7
Issue Department.					Collateral Columns.	
Liabilities.	Dates.	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1865. Per ann.
29,05	April 5	11,01	3,63	14,40	20,90	30 Mar. 4 p. ct.
28,76	,, 12	11,01	3,63	14,11	21,28	
28,79	,, 19	11,01	3,63	14,14	21,01	
28,56	,, 26	11,01	3,63	13,91	21,01	
28,51	May 3	11,01	3,63	13,86	21,61	5 May, 4½ ,,
28,61	,, 10	11,01	3,63	13,96	21,24	
28,73	,, 17	11,01	3,63	14,08	21,30	26 ,, 4 ,,
29,01	,, 24	11,01	3,63	14,36	20,86	
29,57	,, 31	11,01	3,63	14,92	20,91	
29,54	June 7	11,01	3,63	14,89	21,16	1 June, 3½ ,,
29,74	,, 14	11,01	3,63	15,09	20,73	
30,00	,, 21	11,01	3,63	15,35	20,71	16 ,, 3 ,,
30,07	,, 28	11,01	3,63	15,42	22,12	

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.		(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,12	9,33	14,17	,45	April 5	11,11	21,51	8,15	,85	41,63
14,55	3,17	5,83	15,41	,47	,, 12	10,98	20,14	7,48	,83	39,44
14,55	3,18	6,02	14,70	,41	,, 19	10,98	19,28	7,78	,83	38,87
14,55	3,19	6,30	13,96	,49	,, 26	10,98	19,06	7,55	,84	38,44
14,55	3,19	6,71	14,06	,47	May 3	10,98	20,27	6,90	,82	38,98
14,55	3,20	7,35	13,76	,47	,, 10	10,98	20,07	7,37	,90	39,33
14,55	3,21	7,66	13,49	,46	,, 17	10,98	20,03	7,43	,94	39,38
14,55	3,22	8,00	13,55	,47	,, 24	10,98	19,72	8,15	,94	39,79
14,55	3,19	8,71	13,92	,51	,, 31	11,48	19,82	8,66	,92	40,88
14,55	3,20	7,95	13,36	,47	June 7	10,48	19,71	8,38	,97	39,54
14,55	3,21	8,80	12,93	,46	,, 14	10,48	19,52	9,01	,95	39,96
14,55	3,22	9,58	13,67	,45	,, 21	10,48	20,75	9,29	,95	41,47
14,55	3,23	10,49	13,72	,45	,, 28	10,48	22,04	8,95	,98	42,45

CIRCULATION.—Country Banks.

Average Amount of Promissory Notes in Circulation in England *and* Wales *on Saturday, in each Week during the* Second Quarter (*April—June*) *of* 1865; *and in* Scotland *and* Ireland, *at the Four Dates, as under.*

England and Wales.				Scotland.				Ireland.		
Dates.	Private Banks. (Fixed Issues, 4,19.)	Joint Stock Banks. (Fixed Issues, 3,23.)	Total. (Fixed Issues, 7,44.)	Four Weeks, ended	£5 and upwards.	Under £5.	Total. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	Total. (Fixed Issues, 6,35.)
1865.	£ Mlns.	£ Mlns.	£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
April 1	2,92	2,80	5,72	April 1	1,42	2,55	3,97	2,78	2,91	5,69
,, 8	3,03	2,89	5,92							
,, 15	3,06	2,92	5,97							
,, 22	3,04	2,89	5,93							
,, 29	3,03	2,89	5,92	,, 29	1,52	2,62	4,15	2,94	2,92	5,86
May 6	3,04	2,91	5,96							
,, 13	3,04	2,91	5,94							
,, 20	2,99	2,88	5,88							
,, 27	2,93	2,78	5,71	May 27	1,71	2,88	4,59	3,05	2,88	5,93
June 3	2,98	2,76	5,65							
,, 10	2,89	2,75	5,64							
,, 17	2,86	2,74	5,60							
,, 24	2,94	2,74	5,67	June 24	1,70	2,85	4,56	2,96	2,80	5,76

FOREIGN EXCHANGES.—*Quotations as under,* London *on Paris, Hamburg & Calcutta; —and New York, Calcutta, Hong Kong & Sydney, on* London—*with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Paris.				Hamburg.				Calcutta.				
Dates.	London on Paris.	Bullion as arbitrated.		Prem. or Dis. on Gold per mille.	London on Hambg.	Bullion as arbitrated.		New York.	India Council	At Calcutta on London.	Hong Kong.	Sydney.	Standard *Silver* in bars in London.
	3 m. d.	Agnst. Engd.	For Engd.		3 m. d.	Agnst. Engd.	For Engd.	60 d. s.	60 d. s.	6 m. s.	6 m. s.	30 d. s.	pr. oz.
1865.		pr. ct.	pr. ct.			pr. ct.	pr. ct.	pr. ct.	*d.*	*d.*	*d.*	pr. ct.	*d.*
April 1 ..	25·50	—	—	2 pm	13·9	—	—	183½	23½	25¼	54½	par	60⅝
,, 15 ..	·45	—	—	1½ ,,	,,	—	—	165¾	23	24½	,,	,,	,,
May 6 ..	·47½	·1	—	1 ,,	·9¼	—	—	69½	,,	,, ⅜	,, ¾	,,	,, ¾
,, 20 ..	,,	—	—	1 ,,	·10	—	—	156½	22¾	,,	,,	,,	,, 1/6
June 3 ..	·45	—	·1	1 ,,	·9¼	—	—	143	,,	,,	,, ½	,,	,, ⅝
,, 17 ..	·42½	—	—	1½ ,,	·9¾	—	—	151½	,,	24	,,	,,	,,

Shipping Casualties: *an* Approximate Record, *extracted from* "Lloyd's List" *for the* Year 1864, Tabulated *and* Arranged *in* Geographical Sections. *By* Henry Jeula, *Member of Lloyd's*, F.R.G.S., F.S.S.

Part I.

Table I.—*Africa:—West Coast, Cape de Verds, &c.*

1864. To.	Abandoned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Collision. Ships.	Leaky. Ships.	Ship Damaged. Ships.	Stranded. Ships.	Various Damage, Ship and Cargo. Ships.	Wrecked. Ships.	Total. Ships.
January	—	—	1	—	1	2	—	1	—	5
February	1	1	—	—	—	2	1	—	—	5
March	—	—	—	—	1	—	—	—	—	1
April	—	—	—	1	—	—	—	—	—	1
May	—	—	—	—	—	—	—	—	—	—
June	—	—	—	1	—	—	—	—	—	1
July	—	—	—	—	—	—	—	—	—	—
August	—	—	—	—	—	—	—	—	2	2
September	—	—	—	—	—	—	—	—	—	—
October	—	—	—	1	—	—	—	—	—	1
November	—	—	—	—	1	2	—	—	—	3
December	—	—	—	—	—	—	—	—	—	—
Total	1	1	1	3	3	6	1	1	2	19

From.	Collision. Ships.	Collision. Steamers.	Leaky. Ships.	Missing. Ships.	Mutiny or Sickness. Ships.	Ship Damaged. Ships.	Stranded. Ships.	Wrecked. Ships.	Total. Ships.	Total. Steamers.
January	—	—	—	—	—	—	—	1	1	—
February	—	1	—	—	—	—	1	—	1	1
March	—	—	—	—	—	—	—	—	—	—
April	—	—	—	1	—	—	—	—	1	—
May	—	—	—	—	—	—	1	1	2	—
June	—	—	1	—	—	—	—	—	1	—
July	—	—	—	—	—	—	—	—	—	—
August	1	—	—	—	1	—	—	—	2	—
September	—	—	—	—	—	—	1	—	1	—
October	—	—	—	—	—	—	—	—	—	—
November	—	—	1	—	—	—	—	1	2	—
December	—	—	—	1	1	1	—	2	5	—
Total	1	1	2	2	2	1	3	5	16	1

TABLE II.—*America: North,*

1864. To.	Abandoned. Ships.	Captured. Ships.	Captured. Steamers.	Cargo Shifted. Ships.	Collision. Ships.	Collision. Steamers.	Condemned. Ships.	Condemned. Steamers.	Jettison. Ships.	Leaky. Ships.	Machinery Damaged or Short of Coals. Steamers.
January	—	—	—	1	—	—	—	—	1	—	—
February	1	—	—	—	—	—	—	—	—	2	1
March	—	—	—	—	—	—	—	—	—	2	—
April	—	—	—	—	—	—	—	—	—	1	—
May	—	2	1	—	—	—	1	1	—	1	—
June	—	—	—	—	—	—	—	—	—	2	—
July	—	—	—	—	—	—	—	—	—	2	—
August	1	—	—	—	—	—	—	—	1	2	—
September	—	—	—	1	—	—	—	—	—	—	1
October	1	—	—	—	1	1	—	—	—	—	—
November	2	—	—	—	—	—	—	—	—	—	—
December	—	—	—	—	—	—	—	—	—	—	—
Total	5	2	1	2	1	1	1	1	2	12	2

From.	Abandoned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Captured. Steamers.	Collision. Ships.	Collision. Steamers.	Jettison. Ships.	Leaky. Ships.	Machinery Damaged or Short of Coals. Steamers.
January	1	—	—	—	—	—	—	2	—
February	1	—	—	—	1	—	—	—	—
March	1	—	—	—	—	—	—	1	—
April	1	—	—	—	—	—	—	1	—
May	—	—	—	1	—	—	—	—	—
June	—	—	—	—	—	—	—	2	—
July	2	—	1	—	—	—	—	—	—
August	1	—	1	—	—	—	—	3	—
September	1	—	—	—	1	—	3	—	—
October	1	—	—	—	2	—	1	1	—
November	8	2	—	—	3	1	2	11	1
December	3	1	—	—	3	1	1	4	—
Total	20	3	2	1	10	2	7	25	1

British Territory.

Missing.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Ships.	Ships.	Steamers.	Ships.	Steamers	Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers.
—	1	—	3	—	—	—	—	—	—	6	—
—	3	—	—	—	—	—	—	—	—	6	1
—	—	—	—	1	—	1	—	—	—	2	2
—	1	1	1	—	1	—	—	—	—	4	1
—	—	—	1	—	—	—	1	1	2	7	4
—	4	—	1	—	—	—	—	8	—	15	—
—	—	—	2	—	—	—	—	—	—	4	—
—	1	—	3	—	—	—	—	—	—	8	—
1	4	—	6	—	—	—	—	3	—	15	1
—	1	—	—	—	—	—	—	2	—	5	1
—	—	—	2	2	—	—	—	3	—	7	2
—	—	—	—	—	—	—	—	2	—	2	—
1	15	1	19	3	1	1	1	19	2	81	12

Missing.	Ship Damaged.	Stranded.		Sunk.	Various Damage, Ship and Cargo.	Wrecked.		Total.	
Ships.	Ships.	Ships.	Steamers.	Ships.	Ships.	Ships.	Steamers.	Ships.	Steamers.
—	3	3	—	—	—	—	—	9	—
—	—	1	—	—	—	—	—	3	—
1	—	1	—	—	—	1	—	5	—
—	—	1	—	—	—	—	—	3	—
—	1	—	—	—	—	—	1	1	2
—	—	1	—	—	—	1	—	4	—
—	—	3	—	—	—	—	—	6	—
—	—	7	—	—	—	1	—	13	—
—	—	7	—	1	—	—	—	13	—
—	3	6	—	—	—	4	—	18	—
—	9	3	1	—	1	—	—	39	3
—	4	3	—	—	—	1	—	20	1
1	20	36	1	1	1	8	1	134	6

TABLE III.—*America:*

1864. To.	Abandoned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Burnt or on Fire. Steamers.	Captured. Ships.	Captured. Steamers	Cargo Shifted. Ships.	Collision. Ships	Collision. Steamers	Jettison. Ships.	Jettison. Steamers	Leaky. Ships.	Leaky. Steamers
January....	—	—	—	1	5	1	—	—	—	—	—	1	—
February	—	—	—	5	7	3	—	2	—	—	—	3	—
March	—	—	2	1	7	1	—	1	—	—	—	7	1
April	3	—	—	—	2	1	1	—	—	1	—	7	—
May	—	—	1	—	5	1	—	1	—	—	1	4	—
June	—	—	—	2	1	5	—	2	—	—	—	—	—
July	—	—	—	—	1	5	—	—	—	—	—	1	—
August ...	—	—	—	—	2	1	—	1	1	—	—	1	—
September	—	—	—	—	—	1	—	2	—	—	—	—	—
October....	—	—	—	—	1	2	—	—	1	—	—	2	—
November	1	1	1	1	3	5	—	—	—	—	—	4	—
December	—	—	—	—	4	2	—	—	—	1	—	1	1
Total....	4	1	4	10	38	28	1	9	2	2	1	31	2

1864. From.	Abandoned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Burnt or on Fire. Steamers.	Captured. Ships.	Captured. Steamers	Cargo Damaged. Ships.	Cargo Shifted. Ships.	Collision. Ships.	Collision. Steamers	Condemned. Ships.	Jettison. Ships.	Jettison. Steamers
January....	1	—	1	—	1	2	—	—	1	1	—	1	1
February	2	1	—	2	4	3	—	—	2	—	—	—	—
March	3	—	1	1	10	1	—	—	—	—	—	—	—
April	—	—	—	—	2	1	—	—	—	1	—	1	—
May	2	—	—	—	4	1	1	—	1	—	2	—	1
June	2	—	—	—	3	1	—	—	—	—	—	—	1
July	1	—	2	—	1	1	—	—	—	—	—	—	1
August	—	—	—	—	4	1	—	—	—	—	—	—	1
September	1	—	—	—	—	3	—	—	—	1	—	—	3
October....	—	—	—	—	2	1	—	1	—	—	—	—	—
November	—	—	—	—	2	4	—	—	2	—	—	1	—
December	—	—	—	—	3	2	—	—	—	—	—	—	—
Total....	12	1	4	3	36	21	1	1	6	3	2	3	8

North, States.

Machinery Damaged or Short of Coals.	Missing.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers
1	1	3	1	1	1	—	—	1	—	—	12	5
1	—	5	—	1	2	—	—	—	—	—	18	11
—	1	10	—	2	—	—	—	—	—	—	30	3
—	—	12	—	5	—	—	—	—	—	—	31	1
—	1	1	—	7	—	1	—	—	1	—	22	2
1	—	—	—	1	2	—	—	—	—	—	4	10
—	—	1	—	2	—	—	—	—	—	—	5	5
—	—	—	1	—	1	—	—	—	—	—	4	4
1	—	—	—	3	1	—	1	—	—	—	5	4
—	—	—	—	—	2	—	1	—	—	—	3	6
—	—	8	—	—	1	—	—	—	—	—	18	7
—	—	10	—	—	1	—	1	1	1	1	18	6
4	3	50	2	22	11	1	3	2	2	1	170	64

Leaky.	Machinery Damaged or Short of Coals.	Missing.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked	Total.	
Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Ships.	Steamers
1	—	—	2	1	2	1	—	—	—	1	11	5
—	—	—	—	—	1	1	—	—	1	—	11	7
1	—	—	2	—	1	2	—	—	—	—	18	4
2	2	—	1	—	—	—	—	1	1	—	7	5
3	—	1	4	—	—	—	1	—	2	—	21	2
3	—	—	—	—	—	1	—	—	—	—	8	3
—	—	—	1	—	—	—	—	—	—	—	5	2
—	—	—	1	—	3	1	—	—	—	—	8	3
3	—	—	1	—	—	—	—	—	—	—	5	7
—	1	—	1	—	—	—	1	—	—	—	5	2
1	—	—	1	—	—	—	—	—	—	—	7	4
1	—	—	—	—	—	—	—	—	—	—	4	2
15	3	1	14	1	7	6	2	1	4	1	110	46

TABLE IV.—*Australia, Tasmania, and New Zealand.*

1864. To.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Cargo Damaged. Ships.	Cargo Shifted. Ships.	Collision. Ships.	Jettison. Ships.	Leaky. Ships.	Missing. Ships.
January	1	—	—	—	—	—	1	—
February	—	—	—	—	1	—	2	—
March	—	—	—	—	—	1	—	—
April	—	—	—	—	—	—	—	—
May	—	—	—	—	—	—	—	—
June	—	—	1	1	—	—	—	—
July	—	—	—	—	1	—	2	—
August	—	1	3	—	—	—	—	—
September	1	1	—	—	2	—	—	—
October	—	—	—	—	1	—	2	1
November	—	1	—	—	—	—	—	—
December	1	—	—	—	—	—	—	—
Total	3	3	4	1	5	1	7	1

1864. To.	Ship Damaged. Ships.	Ship Damaged. Steamers.	Stranded. Ships.	Various Damage, Ship and Cargo. Ships.	Wrecked. Ships.	Total. Ships.	Total. Steamers.
January	3	—	2	—	1	8	—
February	—	1	—	1	1	5	1
March	1	—	1	—	—	3	—
April	—	—	—	—	—	—	—
May	—	—	—	1	—	1	—
June	—	—	—	—	—	2	—
July	—	1	—	1	—	4	1
August	1	—	—	—	—	5	—
September	—	—	—	—	1	5	—
October	1	—	—	—	—	5	—
November	1	—	—	—	—	2	—
December	—	—	2	—	—	3	—
Total	7	2	5	3	3	43	2

From.	Leaky. Ships.	Machinery Damaged or Short of Coals. Steamers.	Ship Damaged. Ships.	Various Damage, Ship and Cargo. Ships.	Total. Ships.	Total. Steamers.
January	—	—	—	—	—	—
February	—	—	—	—	—	—
March	—	—	—	—	—	—
April	—	—	1	—	1	—
May	—	—	—	1	1	—
June	—	1	1	—	1	1
July	—	—	1	—	1	—
August	—	—	—	—	—	—
September	1	—	—	—	1	—
October	—	—	—	—	—	—
November	—	—	1	—	1	—
December	—	—	—	—	—	—
Total	1	1	4	1	6	1

TABLE V.—*Baltic, Norway, White Sea, &c.*

1864. — To.	Abandoned.		Anchors and Chains.	Burnt or on Fire.		Captured.		Cargo Damaged.	Collision.		Jettison.	Leaky.	Machinery Damaged or Short of Coals.
	Ships	Steamers.	Ships.	Ships.	Steamers	Ships.	Steamers.	Ships	Ships	Steamers.	Ships.	Ships.	Steamers.
January	—	—	—	—	—	—	—	—	—	—	1	1	—
Feb.....	—	1	—	—	—	8	—	—	—	—	—	1	—
March...	—	—	—	—	—	1	—	—	—	—	—	1	—
April ..	—	—	—	1	—	3	1	—	1	—	—	2	1
May.....	—	—	—	—	1	7	—	2	1	1	—	1	—
June ...	—	—	1	—	—	1	—	—	2	1	—	3	—
July.....	—	—	—	—	—	6	—	—	—	—	—	1	—
August	1	—	3	—	—	—	—	—	4	—	—	—	—
Sept. ...	—	—	—	—	—	—	—	—	7	1	—	1	—
October	2	—	—	—	—	—	—	—	2	—	—	4	—
Nov. ...	2	—	—	—	—	—	—	—	3	—	—	1	1
Dec.....	3	—	2	—	—	—	—	—	3	—	—	2	—
Total...	8	1	6	1	1	26	1	2	23	3	1	18	2

1864. — To.	Missing.	Mutiny. or Sickness.	Ship Damaged.	Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
	Ships.	Ships.	Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers.
January	—	—	—	1	1	—	—	—	2	1	5	2
Feb.....	—	—	1	3	—	—	—	—	3	2	16	3
March...	—	—	—	4	3	—	—	—	—	—	6	3
April ...	—	—	3	4	—	—	—	—	—	—	14	2
May.....	1	—	6	5	1	2	—	—	1	—	26	3
June ...	—	—	1	6	—	2	—	1	1	—	18	1
July.....	—	—	—	7	1	—	1	—	1	—	15	2
August	—	—	1	5	—	6	—	—	2	—	22	—
Sept. ...	—	1	1	8	1	2	—	—	4	—	24	2
October	—	—	1	16	—	3	—	—	5	—	33	—
Nov. ...	—	—	1	20	—	3	—	—	5	—	35	1
Dec.....	—	—	10	17	1	3	—	—	6	—	46	1
Total...	1	1	25	96	8	21	1	1	30	3	260	20

1864. — From.	Abandoned.	Anchors and Chains.	Burnt or on Fire.	Captured.		Cargo Damaged.		Cargo Shifted	Collision.		Condemned.	Jettison.		Leaky.	
	Ships.	Ships.	Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers.
January	2	1	—	—	—	3	—	—	2	—	—	1	—	10	—
Feb.....	2	3	—	7	—	—	—	1	1	—	—	2	—	3	—
March...	—	—	—	1	—	—	—	—	1	—	—	2	1	2	—
April ...	—	—	—	—	1	—	—	—	—	1	—	—	—	1	—
May.....	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—
June ...	—	1	—	—	—	—	—	—	—	1	—	—	—	2	—
July.	—	1	—	4	—	—	—	—	3	1	—	—	—	5	—
August	3	1	—	—	—	1	—	2	11	—	—	2	—	16	—
Sept. ...	1	2	—	—	—	1	—	1	4	—	1	—	—	13	1
October	6	—	—	—	—	—	1	1	3	1	—	2	—	9	—
Nov. ...	3	3	—	—	—	—	—	1	6	—	—	—	—	12	—
Dec.....	11	2	1	—	—	2	—	2	5	2	—	8	—	16	—
Total...	28	14	1	12	1	7	1	8	36	6	1	17	1	93	1

1864. — From.	Machinery Damaged or Short of Coals.	Missing.		Mutiny or Sickness.	Ship Damaged.	Stranded.		Sunk.		Various Damage, Ship and Cargo.		Wrecked.	Total.	
	Steamers.	Ships.	Steamers.	Ships.	Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Steamers.
January	—	—	—	—	10	8	1	—	—	1	1	2	40	2
Feb.....	—	9	—	—	2	4	—	—	—	1	—	2	37	—
March...	—	9	—	—	—	2	—	—	—	—	—	1	18	1
April ...	—	1	—	—	—	2	—	—	—	—	—	—	4	2
May.....	—	—	—	—	3	5	—	—	—	1	—	1	14	—
June ...	1	—	—	—	1	6	1	—	—	—	—	1	11	3
July.....	—	—	—	—	1	8	—	—	—	—	—	1	23	1
August	—	—	—	—	6	12	2	4	—	—	—	8	66	2
Sept. ...	—	—	—	1	7	14	1	7	—	—	1	4	56	3
October	—	—	—	—	7	22	1	3	—	—	—	5	58	3
Nov. ...	2	—	—	—	7	37	—	1	1	2	—	7	79	3
Dec.....	—	—	1	—	13	31	—	3	—	5	—	5	104	3
Total..	3	19	1	1	57	151	6	18	1	10	2	37	510	23

TABLE VI.—*Belgium, Holland,*

1864. To.	Abandoned. Ships.	Captured. Ships.	Collision. Ships.	Collision. Steamers.	Jettison. Ships.	Jettison. Steamers.	Leaky. Ships.	Machinery Damaged or Short of Coals. Steamers.
January	—	—	—	—	—	—	—	—
February	—	—	—	3	—	—	—	1
March	1	—	1	2	1	—	—	—
April	—	2	—	2	—	—	—	—
May	—	—	—	—	—	—	—	—
June	—	—	—	—	—	—	1	—
July	—	—	—	—	—	—	2	—
August	—	—	—	—	—	—	1	—
September	—	—	—	1	—	—	—	—
October	—	—	—	—	—	—	—	—
November	3	—	—	—	—	1	3	—
December	1	—	—	—	—	—	2	—
Total	5	2	1	8	1	1	9	1

From.	Aban-doned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Steamers.	Cap-tured. Ships.	Collison. Ships.	Collison. Steamers.	Jettison. Steamers.	Leaky. Ships.	Leaky. Steamers.
January	—	—	—	—	—	—	—	—	—
February	—	—	—	—	1	—	1	—	1
March	—	—	—	1	1	2	—	2	—
April	1	—	—	—	1	—	—	—	—
May	—	—	—	—	—	1	—	1	—
June	—	—	—	—	1	—	—	1	—
July	—	—	—	—	—	—	—	—	—
August	—	—	—	—	—	—	—	3	—
September	—	—	1	—	—	—	—	1	—
October	—	—	—	—	2	—	—	—	—
November	—	3	—	—	1	1	—	1	—
December	1	—	—	—	2	—	—	—	—
Total	2	3	1	1	9	4	1	9	1

and West Coast of Denmark.

Missing.	Ship Damaged.		Stranded.		Sunk.	Various Damage, Ship and Cargo.	Wrecked.	Total.	
Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Ships.	Ships.	Steamers.
—	—	—	—	4	1	—	—	1	4
2	—	—	1	2	—	—	1	4	6
—	1	—	4	—	1	—	1	10	2
—	—	—	1	1	—	—	2	5	3
—	—	—	—	—	—	—	2	2	—
—	—	—	—	1	—	—	—	1	1
—	—	—	—	—	—	—	—	2	—
—	—	—	5	—	—	—	1	7	—
—	—	—	1	2	—	—	—	1	3
—	3	1	3	—	—	—	1	7	1
—	1	—	2	2	4	—	—	13	3
—	—	—	1	2	1	1	—	6	2
2	5	1	18	14	7	1	8	59	25

Machinery Damaged or Short of Coals.	Missing.	Ship Damaged.	Stranded.		Sunk.	Wrecked.	Total.	
Steamers.	Ships.	Ships.	Ships.	Steamers.	Ships.	Ships.	Ships.	Steamers.
—	—	—	4	1	—	—	4	1
—	2	1	1	—	—	—	5	2
—	1	—	—	—	—	—	5	2
—	—	—	1	—	2	—	5	—
1	—	—	1	1	—	—	2	3
—	—	—	—	—	—	—	2	—
—	—	1	1	—	—	—	2	—
—	—	—	—	—	—	—	3	—
—	—	—	1	1	—	—	2	2
—	—	—	5	—	—	1	8	—
—	—	1	—	1	1	—	7	2
—	—	—	3	2	—	—	6	2
1	3	3	17	6	3	1	51	14

TABLE VII.—*Brazils,*

1864. To.	Anchors and Chains. Ships.	Captured. Ships.	Collision. Ships.	Jettison. Ships.	Leaky. Ships.	Missing. Ships.	Mutiny or Sickness. Ships.
January	—	—	1	—	2	—	—
February	—	—	—	—	—	—	—
March	—	—	—	—	1	—	—
April	—	—	—	—	1	—	—
May	—	—	1	1	—	—	—
June	—	—	2	—	—	—	—
July	—	—	—	1	—	1	2
August	—	—	—	—	—	—	—
September	—	—	1	—	2	—	—
October	—	—	2	—	—	—	—
November	—	—	—	—	2	—	—
December	1	1	1	—	2	—	—
Total	1	1	8	2	10	1	2

From.	Abandoned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Collision. Ships.	Condemned. Ships.	Leaky. Ships.	Machinery Damaged or Short of Coals. Steamers.
January	—	—	—	—	—	1	2
February	—	—	—	1	—	—	—
March	—	—	—	—	—	1	—
April	—	—	1	—	—	—	—
May	—	—	—	—	—	2	—
June	—	—	—	—	1	1	—
July	—	—	—	1	1	—	—
August	—	—	—	1	—	—	—
September	—	1	—	1	—	1	—
October	—	—	—	1	—	2	—
November	1	—	1	2	—	3	—
December	—	—	—	2	1	—	—
Total	1	1	2	9	3	11	2

River Plate, &c.

Ship Damaged.		Stranded.	Sunk.	Various Damage, Ship and Cargo.	Wrecked.	Total.	
Ships.	Steamers.	Ships.	Ships.	Ships.	Ships.	Ships.	Steamers.
—	—	3	—	2	2	10	—
—	—	2	—	—	1	3	—
2	—	2	—	—	2	7	—
—	—	2	—	—	3	6	—
—	—	4	—	—	—	6	—
—	—	—	—	—	—	2	—
—	—	1	—	—	2	7	—
—	—	2	—	—	—	2	—
—	—	2	—	—	—	5	—
1	—	5	—	—	2	10	—
5	1	1	1	—	—	9	1
—	—	3	—	—	2	10	—
8	1	27	1	2	14	77	1

Missing.	Mutiny or Sickness.	Ship Damaged.	Stranded.	Sunk.	Various Damage, Ship and Cargo.	Wrecked.	Total.	
Ships.	Ships.	Ships.	Ships.	Ships.	Ships.	Ships.	Ships.	Steamers.
—	—	—	1	—	—	—	2	2
—	—	—	1	—	—	1	3	—
—	—	1	1	—	1	1	5	—
—	—	—	1	1	1	—	4	—
—	2	—	—	—	2	—	6	—
1	—	1	—	—	—	—	4	—
—	—	—	—	—	—	—	2	—
—	—	—	—	—	—	1	2	—
—	1	—	4	—	—	—	8	—
—	—	1	—	—	—	1	5	—
—	—	5	2	1	1	—	16	—
—	—	3	—	—	1	—	7	—
1	3	11	10	2	6	4	64	2

TABLE VIII.—*Cape of Good Hope, St. Helena, Ascension, Algoa Bay, &c.*

1864. To.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Leaky. Ships.	Leaky. Steamers.	Ship Damaged. Ships.	Stranded. Ships.	Wrecked. Ships.	Total. Ships.	Total. Steamers.
January	—	—	—	—	—	1	1	2	—
February	—	1	—	—	1	—	—	2	—
March	1	—	—	—	—	—	—	1	—
April	—	1	—	—	—	—	—	1	—
May	—	—	—	—	1	—	—	1	—
June	—	—	—	—	—	—	—	—	—
July	—	—	—	—	—	—	—	—	—
August	—	—	1	—	—	—	—	1	—
September	—	—	—	—	—	—	—	—	—
October	—	—	—	—	—	—	—	—	—
November	—	—	—	—	—	—	—	—	—
December	1	—	1	1	—	—	—	2	1
Total	2	2	2	1	2	1	1	10	1

From.	Anchors and Chains. Ships.	Captured. Ships.	Collision. Ships.	Condemned. Ships.	Leaky. Ships.	Total. Ships.
January	—	—	—	1	1	2
February	—	—	1	—	—	1
March	1	—	—	—	—	1
April	—	—	—	—	—	—
May	—	—	—	—	—	—
June	—	—	—	—	—	—
July	—	1	—	—	—	1
August	—	—	—	—	—	—
September	—	—	—	—	—	—
October	—	—	—	—	—	—
November	—	—	—	—	—	—
December	1	—	—	—	—	1
Total	2	1	1	1	1	6

*** *The Shipping Casualties in other parts of the world will be given in a future Number.*

JOURNAL OF THE STATISTICAL SOCIETY,

DECEMBER, 1865.

Opening Address *of the* President *of* Section F (Economic Science *and* Statistics), *of the* British Association *for the* Advancement *of* Science, *at the* Thirty-Fifth Meeting, *at* Birmingham, *September*, 1865. *By the* Right Honourable *the* Lord Stanley, M.P., F.R.S.

In opening the Section of Statistics and Political Economy, I need not trouble you with more than a few introductory remarks. It has been questioned how far such subjects ought to form part of the business of a strictly scientific association, and I don't think the question unreasonable, for it must be admitted that while even political economy itself, in its present state, is rather a collection of practical maxims, supported by reason and tested by experience, than a science in the same sense as astronomy or optics are entitled to that name, the topics to which the statistical method is applicable are infinitely various, and have little in common, except this one characteristic, that in every case we appeal either to the numerical tests of accuracy, to figures, or else to fixed and recognized rules, which are assumed to have the same kind of certainty as prevails in physical science. How far that assumption holds good in practice must depend on the judgment both of those who read papers and of those who comment upon them. The truth is, in my opinion, our functions here are rather those of suggesting and stimulating than of originating thought. Discussion, no doubt, we shall have, and in discussion new ideas are constantly generated, and new lights thrown upon previously unfamiliar topics. But it is not in crowded meetings, it is not in debating speeches that any profound and original investigation can be carried on. Meetings like ours answer two purposes apart from that of social enjoyment. One of those is the diffusion, not the origination, but the diffusion of ideas. Books and newspapers and reviews, no doubt, are the main agents for doing that work. Still, it is, I think, indisputable that, as seeing is proverbially more impressive than hearing, so what we hear orally delivered makes upon us a stronger impression than that which lies on a printed page, on which our attention may or may not dwell. The other is the stimulus given to inquiry by the mere fact of inves-

tigations of this kind, or the result of them, being brought prominently and conspicuously before the public. Men go home with their heads full of subjects on which they, perhaps, never thought seriously before. And since, as I believe, nothing once known is ever really forgotten—since an idea which has once found lodgment in the mind, though its presence there may long have been barren, and though we ourselves may be unconscious of it, will often spring up into life after a long interval—it is difficult to determine what crop may not grow, sooner or later, out of the seed thus cast apparently at random.

And now let me say a word as to the right application of the statistical method. To use figures rightly, assuming that they are accurate in themselves, is not as easy a matter as it is apt to appear. There are various fallacies into which unpractised statisticians fall, one or two of which may be worth noting. One, perhaps the commonest, arises from the use of too narrow a basis for calculation. To explain my meaning: given a certain class of men between certain ages, as soldiers, agricultural labourers, artisans, and the like, the aggregate length of life among 10,000, or even among 1,000, of those will be practically a fixed quantity; you can determine it beforehand. But the length of any single life is, of course, uncertain; and if so few as 10, 20, or even 100 lives be taken, the element of chance, or what we call chance, is not sufficiently excluded; and a single exceptional case affects the general result. Another error, less easy to detect, arises from not taking into account all the causes which affect the result. Thus, supposing that the question is the effect produced by the reduction of a tax in increasing the consumption of the article taxed, it is a natural but a very obvious mistake to argue—*post hoc ergo propter hoc*—to speak of that augmented consumption as arising solely from the reduction of duty which preceded it, ignoring other causes—such as general prosperity and consequent augmentation of the consuming power, cheapening of means of transport, or lowering of the actual cost of production by mechanical improvements or otherwise of the article consumed. Or, to take an illustration from a different class of subjects, suppose it is desired to ascertain the average mortality of a certain class, that for this purpose we take the mortality in that class during a certain number of years, and that during one of those years an epidemic of a destructive character has prevailed. You, of course, strike out that year from the series as unduly affecting the average. But if you stop there, your calculation is again vitiated, though in a different manner. For it will almost always happen that an epidemic sweeps away a larger proportion of unhealthy than of healthy lives; and so the years succeeding, their mortality having been, so to speak, anticipated, are above the true

average in point of health, and do not form a fair basis for a permanent calculation. Another variety of the same error, identical in principle, is where effect and cause are confounded. For instance, I have heard a sanitarist argue, with great general truth, in favour of model lodgings in towns, and support his argument by pointing out the diminished ratio of mortality in them as compared with the same class outside. No one could dispute the general conclusion. But in fairness it should have been taken into consideration, as a qualifying proposition, that model lodgings, by their reputation for superior cleanliness and healthiness, attract not the average, but the best men, in point of regular and orderly habits, of the class for whom they are designed—that is, those whose chances of life are the best, independent of the manner in which they are lodged. Hence involuntary exaggeration arises, by which a good cause can only suffer.

A third source of error, perhaps less material, but still worth notice, is that of confounding in one class facts not identical. For instance, the average death-rate in England is easily ascertained; but if you wish to apply that practically to a particular place or class, you must not take the figures as they stand. The death-rate of towns is not that of rural districts—the mortality of infants greatly exceeds that of adults; the term of life is shorter in the labouring than in the well-to-do classes. Age, class, locality, must be separately determined before you can arrive at an even approximately accurate conclusion. The figures which serve for all collectively, precisely because they do so serve, are illusory if applied to any one of these in particular. I mention such possible mistakes in order to show how utterly wide of the truth is that idea that to work by and with statistical calculations is a merely mechanical function needing no ability beyond that of a careful clerk. They require common sense and vigilance against errors, like every other method of inquiry. Figures do not, indeed, deceive you; but if you put them to a use they were not meant for, they will let you deceive yourself.

I suppose it is hardly necessary to remind you of the uses of the statistical method as applied to national affairs. If a man in private life finds his money going too fast and wants to retrench, the first thing he does is to say "I must keep accounts." So individuals keep diaries of particular matters in which they are interested, not trusting to vague recollection, but setting down their notes day by day. Every person of observant habits, or engaged in any pursuit which requires accuracy, is in some sense a statistician. And it is hardly possible to overrate the value of figures, partly as checking that universal tendency to exaggerate, not wilful, but a kind of mental illusion, which operates wherever we are deeply interested, partly

as giving definiteness and precision to ideas which would otherwise remain floating in our minds in a vague and therefore comparatively useless form. For instance, to say generally that a given trade or employment—that of a grinder, or of a soldier in the tropics—is unhealthy, conveys a very faint impression, and affects our feelings but slightly. But put it in this way, that the average length of life in some occupations is shorter by ten or fifteen years than that of an ordinary labourer; and the man himself, however ignorant or thoughtless he may be, is able clearly to realize the sacrifice he is making in going into that business. So with regard to questions of drainage, of ventilation, of food, of the use or abuse of strong drinks, it is the statistical test employed on a large scale which alone can be conclusive. I say on a large scale, for it is of the very essence of statistical inquiry that by dealing with masses it eliminates individual peculiarities. We reason back from the mass to the individual; the subject of the statistician, his typical or representative man, is the average man of many thousands. We are familiar with the effect on public health of the establishment of sanitary statistics. Let me point out one or two instances in which figures form part, and a very curious part, of the doings of our national life. Take the Post Office returns, showing increase of correspondence as compared with the past, and the difference which exists in the amount of letter writing between one part of the country and another—say between the population of Ireland and that of London. Take the Registrar-General's returns of marriages, and note how the number of these relatively to the population rises and falls as the material condition of the masses is for the time better or worse. Take the annual publications of the Customs and Excise departments. Take our census abstracts of the occupations of the people. Take our criminal statistics—a comparatively new department, and one probably still admitting of much improvement, you may read in these collectively the social and economical history of the age in which we live. And note everywhere the absence of mere chance. We speak of chance—it is a word which we must use for convenience sake—but we really mean by it not that the result discussed is in itself uncertain, but that some or all of the determining causes of such result are to us unknown. We imply not the absence of a law, but inevitable ignorance, on our part, of what the law is. When you find uniformity, or something which closely approximates to uniformity, in such matters as the number of letters yearly posted without addresses, in the number of widows and widowers who re-marry, or in the number of detected offences of the same nature committed within the year, it is impossible not to be impressed, however trifling may be the illustration of them—with the permanence and steadiness of the laws which regulate our existence. Now, is there any use in

knowing that? I think there is. In the first place, no knowledge that bears upon human life is useless, even though we do not at the moment see the practical application to which we can put it. A discovery always turns to account in some way. The most important mechanical inventions owe their origin to purely mathematical theories, which the authors of them never dreamt of so applying. In the next place, it is only by observing men in masses, and with the aid of all such helps to accuracy as we can command, that we can fairly appreciate the influence of general causes, whether material or moral, national or individual. Take a town in which a thoroughly good system of drainage has been established, you want to learn what has been the effect of that system on health. Question each person or each family separately, you will, probably, get very conflicting and dubious testimony. But register the deaths and causes of death, compare them with what they were before, and with similar returns in other places, and the decrease will give you at once a measure of what has been effected.

And, lastly, of that large class of human evils which are repairable as well as preventable—evils affecting not life, but property, or affecting life as considered in its relation to property—there are very few to which the principle of insurance may not be applied. Now, what does insurance mean? It is the opposite of gambling. The gambler, desiring to gain something which is not his, risks in return something of that which he actually possesses. The insurer, seeking to preserve what he has, submits to a certain small fixed deduction, and thereby precludes the occurrence of a much larger possible loss. The one purposely increases the hazards of life, the other purposely diminishes them. Now if it be, as I believe it is, indisputable that a sense of security is one of the very first requisites, both for material improvement and mental development, whatever creates or strengthens that sense of security is an important element of human progress, and when a proprietor has guaranteed himself, according to the nature of his property, against fire, against shipwreck, against loss of stock by disease, or of crops by storms; still more when the man who lives by his industry has secured himself, not indeed against premature death, but against that to which such persons having families is the sharpest sting of premature death, the dread of leaving unprovided for those whose existence is bound up with his own, it is difficult to estimate by any test of results that can be shown on paper the amount of good which is practically effected, for the gain must be measured, not by the number of persons actually saved from distress, but by the infinitely greater number saved from the apprehension of distress, the fear being often as bad as the thing feared. It is not easy to overrate the benefit which the practice of insurance has conferred, and will confer, on mankind. And why,

in opening this Statistical Section, do I refer to it? Because it is a practice founded in its very nature on statistical inquiries, and which without such inquiries could not have existed.

It remains only to speak of a few *desiderata*, a few things wanting to be done. In England our chief defect is the absence of agricultural statistics. That is a question which has been long before Parliament; the difficulty of collecting such facts as are really wanted does not seem to me great, but, between prejudices on both sides, statisticians asking too much and farmers invariably jealous of giving any information, the thing has always fallen through. I hope, in that respect, the new Parliament may be more fortunate than its predecessors. I ought also to note, as inconvenient in the highest degree, the excessive complication of our English weights and measures. They are, probably, by far the worst in Europe in that respect. But I note the fault in no very sanguine spirit as to a remedy being applied. Our national peculiarities—a great indifference to simplicity and uniformity, dislike to change in anything to which we have been accustomed, and the total absence of any strong interest in the subject, except among a few individuals, place reform on this matter wholly beyond my expectation. Parliament, no doubt, has legalized the use of the metric system, a step which is very well as far as it goes, but which really for all practical purposes leaves matters where they were; compulsion is not to be thought of, and, on the whole, I strongly suspect the next generation will do exactly what I am doing now,—admit the inconvenience and say it can't be helped. Even with regard to the decimalization of coinage, which is a matter really in the power of the Government, I do not think we are likely soon to see anything done; and it is obvious that weights and measures cannot be changed without a general feeling of willingness among the people to give up those existing and adopt the substitutes. It is more satisfactory to look to the operations of the Board of Trade. Their little yearly volume called the "Statistical "Abstract," is full of useful information, packed into the smallest compass, and arranged with a careful rejection of trifling or unimportant details. I should be glad to see the scope of the publication extended, and references added showing where fuller details on the subject dealt with might be found. I think it is also worth considering, since every European Government now takes a decennial census, whether some understanding may not be come to among the leading States to frame their inquiries as nearly as may be in the same way, and to publish them in the same order and form, so that for purposes of comparison they may be at once and easily available. For, notwithstanding local and national divisions, differences of language, of institutions, and of race, Europe inclines more and more to become in its general habits of thought and action one community,

and Napoleon's phrase, that a war in Europe is a civil war, like most sayings of great men, becomes more and more applicable, and not less so by the progress of time. I do not know that it would serve any useful purpose if I were now to anticipate the contents of the papers that may be read in this Section. They will be many, various, I hope interesting, and ought to lead to useful discussion. Let me only offer to those who take part in our discussions one or two suggestions. The first is, time runs fast. You can say all you have got to say in very few words, if you will think it over beforehand. It is not abundance of matter, it is want of preparation, want of exact thought, that makes diffuseness. A man goes round and round his meaning when he is not perfectly clear what it is that he does mean. Again, we don't want preambles or perorations. We are not a school of rhetoric; and in addressing an educated audience a good deal may be taken for granted. Lastly, we only wish to get at the truth of things. All ideas are welcome; but mere verbal criticism is of no value to us. Some of the topics with which we shall deal may, perhaps, have a political bearing; and in that case I hope and expect that they will be dealt with in a strictly impartial and scientific spirit.

On the Original *and* Acquired Meaning *of the term* "Statistics," *and on the* Proper Functions *of a* Statistical Society: *also on the* Question *whether there be a* Science *of* Statistics; *and, if so, what are its* Nature *and* Objects, *and what is its* Relation *to* Political Economy *and* "Social Science." *By* William A. Guy, M.B., F.R.C.P., *one of the Honorary Secretaries of the Statistical Society.*

[Read before the Statistical Society, 21st November, 1865.]

It cannot, I think, be denied that those who cultivate the branch of knowledge which this Society was established to foster and promote, are held in less estimation than men who devote the same labour and similar talents to many other pursuits. This arises in part from misapprehensions as to the meaning of the word "Statistics," and as to the objects and aims of statistical inquiries; and in part to the common mistake of confounding the laborious collection of facts which constitutes the second process of every sound statistical inquiry with the whole procedure, overlooking alike the judgment and scientific insight which planned the inquiry, and the critical and analytical talent employed in discovering and displaying the truth. The aim of this communication is to vindicate the claim of Statistics to an honourable place among the sciences, and of statistical inquiries to the credit of which they have been unintentionally deprived. In carrying my purpose into effect, I shall observe the order of inquiry indicated in the title of the paper itself.

1. *On the Original and Acquired Meaning of the term "Statistics."*

The word "Statistik," from which the English "Statistics" is derived, is somewhat more than a century old. It appears to have been first used by Gottfried Achenwal, professor of law and politics at Göttingen, in his work entitled "Statsverfassung der heutigen "vornehmsten Europäischen Reiche und Völker,"* of which the first edition bears date 12th April, 1749. The word *Statistik* does not appear on the title page of the book, but is printed in large letters at the head of a short sketch of the bibliography of politics prior to the appearance of the author's work. This sketch is headed "Vor-"bereitung von der STATISTIK [Statskunde] überhaupt," and

* The sixth edition of this work has been purchased for the library of the Society.

gives a list of ten works in Latin and German published between the years 1668 and 1750, which works are best described as treatises on universal history; and it is followed by a philosophical disquisition in sixty-one sections, respecting the several elements which go to make up a full and complete history of a modern State. It is in this introduction that the original meaning of the term statistics is to be sought.

Now we find the author incidentally defining the term Statistik as that branch of learning (Disciplin) which occupies itself with the extent, limits, subdivisions, and natural relations of States, their advantages, their history, and their origin; as the description of the political constitution of one or more States; as synonymous with Statskunde and Statsbeschreibung (the science and the description of States). By statistics (die Statistik), he says, we attain to a knowledge of States and their constitution. But it is not everything that can be truly said of a State that properly finds a place in statistics, but only what contributes to political knowledge, and conduces, in an eminent degree, to the welfare of a State; so that the more any matter concerns the general well-being of a State the more necessary is it that it should find its illustration in statistics. Again, it is not what the vulgar care most about that proves most attractive to the statistical inquirer. The number of swine, or the first use of coffee in country parts, has more importance in his sight than the pedigrees of noble houses. And again, in speaking of statistical collections, the author insists that the facts of which they consist, should be as little as possible mixed up with reasonings. They ought to be mere facts. Lastly, this *Statistik* is worthy of honour, for from it history borrows a considerable portion of her light, to general public law it contributes most valuable material, and it enriches politics with a multitude of practical data.

What the author really means by statistics, is practically shown in the eight short treatises on Spain, Portugal, France, Great Britain, the Netherlands, Russia, Denmark, and Sweden, which constitute the body of his work. Taking Great Britain as our example, we find him first giving (in seven short sections under the head of Statsveränderungen) a short history of our origin and growth; then under the head of Länder, an account of our boundaries, climate, mountains, and streams, of our constituent parts, and their divisions into counties, with their productions; then under the head of Einwoner,* the number of inhabitants, and their character; next under Statsrecht, our fundamental laws, the order of regal succession, the prerogatives of the crown, the character of the government, the estates of the realm, the houses of parliament; next, under the

* It will be seen that I retain the spelling of this and other words as used by the author.

head of Hof- und Regierungs verfassung, the titles of the king and crown prince, the royal arms, the officers of state, the privy council, the State religion, our universities and places of education, our local government, our legal procedures, our manufactures, internal traffic, and external commerce, our coinage, our finances, system of taxation, and national debt, our army and navy. This account of Great Britain is finished by a short chapter headed Statsinteresse, in which the author sets forth in few words what he conceives to be the causes of the then prosperity of the nation which he, perhaps not inaptly, designates "the paradise of lawyers."

It will be seen, then, that Achenwal uses the word *Statistik* as strictly synonymous with *Statskunde*, or State-science, and *Statsbeschreibung*, or the description of States; and that under the name of statistics he describes the actual condition of a State under all its aspects—territorial, political, educational, religious, industrial, commercial, and financial—its means of offence and defence being given as a necessary part of its history, but the exploits of its army and navy being passed over or lightly touched upon. It will be seen also, that the use of figures is not insisted on, although facts, pure and simple, and as much as possible disencumbered of theories, are commended as of the greatest value.

From the general tone and spirit of Achenwal's introductory chapter, I infer that he felt the want of some one comprehensive word which should supersede the many terms in use at the time at which he wrote, such as Statskunde, Statsbeschreibung, Statslehre, Statswissenschaft, Statsrecht, Statskenntniss, Statsklugheit, &c. The meaning of some of these terms he defines very clearly, as in the following passage. "Statslere teaches how States should be: "Statskunde describes them as they are: Statsgeschichte shows "how they have become what they are. Statskunde is a stationary "Statsgeschichte, as this is a progressive Statskunde. It must "be understood, then, that we are not now treating of a States-"history according to the taste of the Anno Domini men, but "according to that of Robertson, Lagerbring, Gyannoni," &c.

The word Statistik, then, means the description of States as they are; and the description contemplated by the author is obviously such an one as the best modern historians carry into practical effect when they contend that history should not be a mere record of names, dates, wars, and political struggles, but also afford complete and faithful pictures of manners and customs, sciences and arts, industry and commerce—of everything, in fact, which contributes to the wealth, strength, honour and dignity of a nation.

Additional light is thrown on the meaning of the word *Statistik* by the incidental use of the word *Statisten* or *Statsgelerten*, the learned in matters of state, a word which is evidently the exact

equivalent of the word Statist, which our old English writers frequently employ—always in the sense of a man versed or busied in State matters, but with shades of difference. Shakspeare seems to use it in the sense both of politician and statesman. Ford, in the latter sense. Beaumont and Fletcher contrast *statists* with men of action. Milton speaks of *statists* and lawyers, and seems to use the word *statist* as synonymous with statesman, and with patriot. Wood describes Gardner as a great *statist*. Sir Thomas Browne classes *statists* and politicians together. Lastly, Carlyle quotes an old proverb, not intended to be very complimentary to us, "as the "*statist* thinks the bell clinks." The word "statism," again, is used by some old authors as synonymous with "policy," "the arts "of government," or statecraft; and the words "Statistical" and "Political," "Statist," "Statesman," and "Politician," are given as equivalent terms by Todd in his edition of Johnson. For most of these references, which are given *in extenso* below,* I am indebted to Todd's edition of Johnson's "English Dictionary" and Richardson's "English Dictionary;" and I bring this part of my paper to a

* "The greatest politician is the greatest fool; for he turns all his religion "into hypocrisy, into *statisme*, yea into atheisme, making Christianity a very foot-"stoole to policy."—Junius, *Sin Stigmat* (1639), p. 613.

"Hence it is that the enemies of God take occasion to blaspheme, and call our "religion *statism*."—South, vol. i, sermon 4.

"And besides them I keep a noble train,
Statists and men of action."—*Gonzales.*
} Beaumont and Fletcher, *Laws of Candy*, act ii, scene 1.

"You are an eminent *statist*, be a father
To such unfriended virgins, as your bounty
Hath drawn into a scandal."
} Ford, *The Fancies Chaste and Noble*, act ii, scene 3.

"Statists indeed,
And lovers of their country."
} Milton, *Paradise Regained.*

"Though he (Cicero) were sparing otherwise to broach his philosophy among "*statists* and lawyers."—Milton, *Doct. and Disc. of Divorce*, b. ii, c. 3.

"The people looking one while on the *statists*, whom they beheld without "constancy or firmness."—Milton, *History of England*, vii, b. ii.

"He (Gardner) was a learned man and of excellent parts, a great *statist*, and "a writer of many books."—Wood, *Fasti, Oxon*, vol. i.

Posthumus to Philario. "I do believe
(*Statist* though I am none, nor like to be)
That this will prove a war."
} Shakspeare, *Cymbeline*, act ii, scene 4.

"I once did hold it, as our *statists* do,
A baseness to write fair."
} *Hamlet to Horatio.* *Hamlet*, act v, scene 2.

"As the *statist* thinks, the bell clinks."—*Old Proverb.*

"*Statists* and *politicians* unto whom *Ragione di Stato* is the first consider-"able, as though it were their business to deceive the people."—Sir Thomas Browne, *Pseudodoxia Epidemica* (Vulgar Errors), book i.

"*Statists* that labour to contrive a commonwealth without our poverty, take "away the object of charity, not understanding only the commonwealth of a "Christian, but forgetting the prophecy of Christ."—Sir Thomas Browne, *Religio Medici*, part ii, 1642.

close by quoting the definition of Statistics given in those works. "Statisticks (from Statism or Statist). That part of municipal "philosophy which states and defines the situation, strength, and "resources of a nation."—Todd's *Johnson*. "Statistick (*Fr.* Statis-"tique) is a word for which we are said to be indebted to a living "writer. Statisticks is applied to everything that pertains to a "State—its population, soil, produce, &c."—Richardson.*

How the word *Statistik* came to undergo so considerable a change of meaning, as to imply not a history or description of States and Kingdoms, but only a part of the materials of which such history or description is composed (as if for a stately building we were to substitute the bricks or stones, for a finished painting some only of the colours), it would not be easy to point out, nor would the search after the facts repay the labour of the investigation. Suffice it to state that such a change had already taken place when this Society was first called into existence in the year 1834.

On referring to the Report of the third meeting of the British Association, held at Cambridge in 1833, I find Professor Sedgwick stating from the chair that, in addition to the five existing sections, another, originating with some distinguished philosophers, had come into operation, the object of which was to promote *statistical* inquiries. The president thought it necessary to justify the addition of this sixth section, and, in doing so, insisted that it should limit itself to "matters of fact," "mere abstractions," and "numerical "results," constituting what might be called "the raw material to "political economy and political philosophy," by which perhaps "the "lasting foundations of those sciences may be ultimately laid." The formation of this new section was referred to in the following year as the prelude to the establishment of a flourishing society which acknowledged itself the offspring of the Association, and promised, by a similar procedure, to advance materially the greatly neglected subject of British statistics. The prospectus of our Society, which was printed in the Transactions of the Association, fixed the date of our foundation as the 15th March, 1834, and set forth very clearly our objects and plan. It stated that the Statistical Society of London was established for the purpose of procuring, arranging, and publishing "facts calculated to illustrate the condition and "prospects of society," that "the first and most essential rule of its "conduct" was "to exclude carefully all *opinions* from its trans-"actions and publications—to confine its attention rigorously to "facts—and, as far as it may be found possible, to facts which can be "stated numerically, and arranged in tables."

* The living writer here spoken of is probably M. B. P. Capper, "Statistical Account of the Population, &c., of England and Wales, 1801."

It will be seen, then, that at the date of the establishment of the Statistical Section of the British Association, and of this Society (its offspring), *statistics* had already come to mean rather the materials of a science than the science itself. As Professor Sedgwick understood the word, it represented mere facts to be used as the raw material of political economy and philosophy, but as the Founders of our Society apprehended it, the facts were to be applied to the building up rather of a social than of a political edifice. But there was one point upon which all parties seem to have been agreed. The statistical labourer was not to be indulged with the luxury of opinions; he was to be a patient drudge, binding up his sheaves of wheat for others to thresh out. The very crest and motto of the Society, stared him in the face from the cover of every *Journal*, reminding him of the humble and unintellectual work expected at his hands. In putting forth this restricted and unattractive programme, the British Association seem to have been actuated by a desire to secure for the new section facts as trustworthy as the observations and experiments in physical science, with which the other sections had to do; while the Statistical Society wished to separate itself as much as possible from the hypotheses and unfounded assertions which had heretofore formed great part of the stock in trade of the political economist and social reformer. But both parties overlooked the fact that the new section of the Association on the one hand, and the Statistical Society on the other, had other functions to discharge than that of mere depositories of facts. Meetings were to be held at stated intervals, which should offer to those who attended them, such attractions as are put forth by other societies. The members would expect to listen to, and to take part in, not merely dry strictures on the author's facts and figures, the soundness of the units, and the sufficiency of the numbers, but discussions on the broad principles which the figures might seem to suggest or establish. If the author could succeed in concealing or stifling his opinions, his audience would not be restrained from expressing theirs; and it was surely hard to deny him a liberty which could not be refused to them.

It is obvious, too, that exactly in proportion to the talent and originality of the author, and the desire of the members to profit by his labours, would be his own restiveness under the restrictions imposed upon him. Accordingly, as early as May, 1835, we find Mr. Hallam, the treasurer of the Society, at a meeting at which he himself presided, "giving an account of regulations enacted by the "magistrates of Ypres, for the maintenance of the poor in the year "1530," in which account there does not occur a single figure, much less a single tabular statement, but the distinctly expressed *opinion* that these Belgian provisions for the poor formed the model for our

own English legislation in the reigns of Henry VIII and Elizabeth: and in December of the same year, Mr. G. R. Porter reads a paper "On the Connection between Crime and Ignorance, as exhibited in "Criminal Calendars." Now Mr. Hallam begins his communication by remarking "that it seems within the province of the Statistical "Society to collect such information from the history of past times, "as illustrates the condition of society, especially in relation to the "more important discussions of political economy;" and Mr. Porter, after rehearsing the objects of the Society, observes "that occasions "will sometimes arise when it may be permitted to the members "of the Statistical Society to offer the result of investigations "whereby they may have detected fallacies, and especially those "which have been suggested, and are apparently supported by "inquiries more strictly coming within the limits of statistical "labours." Thus early, then, in the history of this Society, do we find its very founders and office-bearers, men of whom we are justly proud, breaking through the narrow bounds within which it was sought to confine them, and setting at nought the self-denying ordinance which, had it been narrowly observed and strictly acted up to, would have made the Statistical Society of London a very bye word for contented dulness and senseless drudgery. But fortunately for us the Society has become moulded almost imperceptibly into a more attractive form. The facts and figures of many of our most valued contributions have first been collected and arranged by men who submitted to the labour because they had opinions which they wished to bring to the test, and have then been brought before us instinct with the living energy and force which thought lends to fact.

The most cursory examination of the *Journals* of the Society, or of the excellent Index to their contents, must serve to convince us that the eminent men to whom I have just referred, did not stand alone in their disobedience to the strict letter of our original prospectus. Their successors followed their example, and produced papers for discussion at our evening meetings, and for subsequent publication in the *Journal*, of which it may be worth while to attempt an analysis. I find that these papers admit of being arranged in at least as many groups as those which follow:—

1. Papers giving an account of the existing state or condition of entire nations or kingdoms—such an account as Achenwal himself would have designated by the term *Statistik*.

2. Papers giving a similar account of parts only of such nations or kingdoms, of provinces, counties, districts, cities, towns, and parts of towns, rural districts, and villages. These descriptions would probably have received from Achenwal the same designation.

3. Papers discussing, in relation to whole kingdoms, or parts of them, such matters as education, crime, industry, health, wealth,

manufactures, commerce, special branches of industry and production, &c.

4. Reports of the inquiries of committees appointed by the Council, as the Committees on Education in Westminster, Finsbury, and London, on the state of Church Lane, St. Giles's, on Registration and the Census, on Beneficent Institutions, &c.

5. Polemical papers, contesting the opinions of authorities past or present, as derived by them from the use of numerical returns or otherwise.

6. Papers on the numerical method, and the scientific treatment of facts and figures.

7. Papers discussing, without the aid of figures, some historical question, or some question relating to the proper meaning and use of terms employed by the political economist or student in some allied science. These papers are few in number, and may be looked upon as exceptional.

8. Papers on subjects belonging properly to some well defined branch of science, such as physiology or medicine, admitted into the *Journal* as rich in facts and figures, but having no direct bearing on the objects of "statistics" properly defined. Such are some parts of the paper of Dr. Clendenning "On the Relative Frequency of "Pulmonary Consumption and Diseases of the Heart," published in the first volume of the *Journal*, and the greater portion of that of Dr. Hutchinson, "On the Results of Experiments with the "Spirometer," published in vol. vii.

This classified outline of the papers submitted to the Society for discussion, and printed in our *Journal*, will prepare the way for the consideration of the second subject comprised in the title of my paper, namely,

2. *The Proper Functions of a Statistical Society.*

It will not, I think, be disputed that Achenwal's definition of the word *Statistik* is quite in keeping with the now acknowledged functions of a statistical society, and that if the meaning of the term be so enlarged as to embrace not States or kingdoms only, but all their constituent parts, the functions of the society may be very properly enlarged in a like degree.

Again, it will not be denied that Achenwal was right in insisting upon the value of facts, nor that a statistical society would forfeit its distinctive character, if it did not aim at collecting, arranging, and tabulating facts, as its means of illustrating and describing the actual condition of States, Kingdoms, and their constituent parts.

But it is evident that the definition of Achenwal, even with the extension here indicated, would be too narrow to embrace all the proper functions of a statistical society, as now generally understood. Something more than a true history and description of

States and their constituent parts is clearly implied in the words used by our founders, when they describe our object and plan to be the procuring, arranging, and publishing "facts calculated to illus-"trate the condition and prospects of society." Now the word "society" is evidently not synonymous with the word "State," and it is doubtful whether Achenwal ever proposed to himself that minute and comprehensive survey of man as a being living in society which our founders had in view. He contemplated, as I think, an improved history of States; we an improvement in the condition of the individual, the constituent unit of the State. He aimed at a correct knowledge of States for the sake of the knowledge itself; we at a perfect knowledge of the individual, with a view to his improvement as a man, such knowledge being impossible of attainment through the isolation of an individual from the class to which he belongs, inasmuch as the propriety of the selection might be questioned; such improvement being equally impossible through the obvious inadequacy of remedial measures, applied merely in detail, to individuals suffering some common injury. Hence the necessity of large numbers of facts.

The true conception of the functions of a statistical society may, I think, be best arrived at by combining into one comprehensive sentence the definition of Achenwal and the statement of our prospectus, and adding to this combined formula, such minor details as are obviously suggested by the proceedings and usages of our Society. If this view of the matter be correct, the following summary of the proper functions of a statistical society will not be very wide of the truth:—

1. To collect and preserve facts illustrating the past and present condition and probable future prospects of States and their territorial divisions, and of the several classes of their inhabitants. This is best done by means of a library, well arranged and duly catalogued, containing both books and manuscripts.

2. To add to existing facts by the special inquiries of committees, or of persons appointed for the purpose.

3. To promote the discussion of unsettled questions and the correction of erroneous views in political and social economy, by arranging for the reading of papers at periodical meetings to be held for the purpose, such papers only to be deemed to be within the province of the Society, as make use of facts and numerical statements in support of the views therein expressed.

4. To encourage to the utmost all efforts tending towards the establishment of sound principles for the guidance of those who engage in the work of collecting, arranging, and tabulating facts, and in applying the numerical method to the discovery of truth.

5. To discourage the improper use of the word statistics as a

mere synonym for collections of facts, irrespective of the use to which they are put; and to uphold the dignity of the Society as applying facts of a peculiar order to purposes of the highest utility.

6. To discourage and repress all encroachments on the arena of politics, as objects of party strife.

Such would appear to be the proper functions of a statistical society as determined by a joint consideration of the original meaning of the term Statistics, the programme of our Society, and our experience of its actual working.

3. *Is there a Science of Statistics; and, if so, what are its Nature and Objects, and what is its Relation to Political Economy and Social Science?*

It is obvious that we are not in a condition to answer the question, whether there be a *Science of Statistics*, until we have first settled (if that be possible) the meaning of the word Science itself; and it is equally obvious that this word is one of very unsettled import, having every shade of meaning between *knowledge arranged and methodised*, and *certainty based on demonstration*. On consulting the same Dictionaries from which I collected the meanings of the words Statist and Statistics, I learn that according to the usage of the best authors, science may either retain its original meaning namely, *knowledge*, or come to signify any "one of the seven liberal arts," or "any art attained by precepts or built on principles," or "certainty grounded on demonstration." If Shakspeare and Pope may be cited as authorities for the right use of words, music and mathematics are sciences, as are also the seven "liberal arts," grammar, rhetorick, logick, arithmetick, musick, geometry, and astronomy. Glanville, a prose writer cited by Johnson, goes the extreme length of speaking of the "indisputable mathematics" as the only *science* heaven hath yet vouchsafed to humanity. Gibbon seems to use the word science as equivalent to the word speculation.

But the adjective, *scientifick*, appears to have been used by our best prose writers in one and the same sense of demonstration or certainty. Thus Sir Thomas Browne appears to consider science as "natural philosophy proceeding from settled principles," and issuing in "a sure and rational belief;" Howell speaks of *scientifical* knowledge, as something of unusual excellence; South of *scientifick* evidence as something surpassing "high probability" and "moral certainty;" and Locke has the phrase "scientifical or demonstrative reasoning," and speaks of "a comprehensive, *scientifical*, and satisfactory knowledge of the works of nature."*

If from the works of authors cited in dictionaries, we pass on to consider the more formal definitions of science as given by our best

* See Todd's Johnson, and Richardson's "English Dictionary," under the words "Science" and "Scientifick."

authorities, we find great differences of meaning. I will content myself with quoting two eminent scientific men, Sir John Herschel and Professor Sedgwick. The former, in his "Discourse on Natural "Philosophy," p. 18, tells us that "Science is the knowledge of "many, orderly, and methodically digested and arranged, so as to "become attainable by one." The latter understands by science (I quote from his address to the British Association in 1833), "the consideration of all subjects, whether of a pure or mixed "nature, capable of being reduced to measurement and calculation." These definitions may be taken to indicate the two extremes of meaning of the word Science. It can mean nothing less than the one, nor more than the other. But perhaps its true meaning is to be gathered not from dictionaries or from the definitions of philosophers themselves, but from a close examination of its primary and secondary uses as drawn from examples. It is in this way that I shall myself attempt to answer the question—What is a science?

In the first place, it is obvious that the word Science originally meant knowledge, as the word Art meant skill, and that *a* science meant a special application of knowledge as *an* art did a special application of skill. But it is also obvious that the words science and art have ceased to be exactly synonymous with knowledge and skill. They evidently mean knowledge and skill with certain qualifications and reservations.* An art, so long as it continues to be a mere affair of skilful handiwork, remains an art; but directly it submits itself to the guidance of well ascertained general principles, it may claim to be a science, provided only that its applications have a certain largeness of scope, combined with utility of a high order. Thus there is an art of music, and a science of musical composition; an art of drawing, and a science of perspective; an art of construction, and a science of architecture; an art of reasoning, and a science of logic; an art of persuasion, and a science of rhetoric; an art of calculation, and a science of arithmetic. In all these instances the art has a large aim and an undoubted utility as ministering to some universal want, or some general craving for refined amusement of the senses and mind, while the science is characterised by the universality and precision of its application to the special instances created by the corresponding art.

An examination, therefore, of the arts that have grown into sciences, and are generally acknowledged to deserve the name, shows that the characteristic of sciences is the possession of general principles applied with precision to individual instances furnished by the arts out of which they have grown, or to which they lend their aid. In some instances, it will be seen that the principles of the

* "Knowledge, emphatically, not imperfect or pretended."—Richardson's "English Dictionary."

science, though precise, are few in number, while the art is characterised by largeness of application within very narrow limits. Such is the science of logic as applied in the art and act of reasoning. In other cases, arts draw their rules of practice from more than one science, as is the case with architecture, which rests on the sciences of construction and ornamentation; or with the modern art of war, which uses the sciences of projectiles and of fortification, to which may perhaps be added the science of chemistry, and possibly a science of self-defence, of which fencing, with its precise phrases and definite rules of procedure, is the highest development.

In order, then, that any special application of knowledge or of skill may attain to the dignity of a science, and claim its patent of nobility, it must show universality and precision in its principles or rules, and utility of a high order in the application of them. But to these marks or signs of science, we must make some addition if we would satisfy the requirements of those who use the word science in its most restricted sense. They will have it that the principles or rules in question must not only be universally applicable to all suitable special instances, but they must be expressed in figures of arithmetic, and the results of their application must be certain. The eclipse must happen to a moment, and last for its calculated period; the elements of a compound body must combine in their atomic proportions to the ten-thousandth of a grain; musical notes must be so arranged and combined, as not to offend the most sensitive ear; and the lines of a drawing in perspective, must fall with such minute precision, that the most practised eye shall not detect the least departure from nature.

But is it not obvious that to limit the application of the word science thus narrowly, is to deny the use of that honourable title to some of those branches of knowledge which have been enriched by the greatest and most fruitful discoveries? Surely the men who in practising the noble art of healing, walk in the light of the discoveries of Harvey and Charles Bell, who have attained to the prevention of at least one loathsome malady, and to the performance of operations without pain; who have completed their knowledge of anatomy, and made great progress in the study of minute structure, of the chemical components of the body and its secretions, and of the subtle causes of disease; who make constant and skilful use of the most delicate instruments of investigation; who possess many approved remedies, some of which they apply with certainty to the cure of some maladies, and to the relief of others; have a claim to a higher title than that of mere artists, and may speak of themselves as men of science, and boast of a science of medicine, though their few certainties are mixed up with much that is purely conjectural, and their best knowledge runs like a golden thread through a

tissue of imperfectly ascertained facts. For like reasons it would be unjust to those who practise the excellent arts of farming and horticulture in the light of modern discoveries, to refuse to acknowledge a science of agriculture; and to the statesmen who administer the affairs of nations on the principles established by such men as Adam Smith, a science of political economy.

But in actual practice the term science is applied to branches of knowledge which are nearly or quite innocent of the use of figures; as, for instance, to Botany, which had earned its title by careful classification and exact description, even before it called to its assistance the microscopist to unravel, and the chemist to analyse. the tissues of plants. Zoology and Entomology, have perhaps even less claim to the name of sciences; and Geology owes that title rather to the largeness and grandeur of its objects, than to the precision of its information.

Chemistry, again, of which the claim to the dignity of a science is not to be disputed, owes its proud position to many distinct causes —to the joint possession of a numerical theory, of a precise and condensed nomenclature, of delicate instruments of analysis and discovery, joined to its perfect command of the materials on which it operates, and its intimate relations with other sciences on which it is in a condition to confer the greatest benefits.

In direct contrast to the science of chemistry, stands a branch of knowledge which has no practical applications, and owes its title to be termed a science solely to the dignity and surpassing interest of its object, and the singular talent and acuteness of its most distinguished cultivators—I mean the science of metaphysics. Setting this aside as exceptional, we may say of science in general that it should have practical applications of acknowledged utility and dignity, and general principles, comprehensive and precise, to which the mere practice of an art could not have given rise. But the hastiest survey of those branches of knowledge to which the term science has been, by general consent, applied, reveals a diversity of character in keeping with the obvious variety of practical pursuits to which men are impelled by necessity or choice. Astronomy has to do with objects of which the mass cannot be increased or lessened, nor the composition altered, nor the movements controlled by human interference. Its claim to be a science must, therefore, rest, in the main, on the exact fulfilment of its prophesies. The sciences which preside over all our great works of construction, are tested by the stability and durability of the works for which they supply the necessary numerical data. Chemistry vindicates its title by the visible and tangible results of its operations. But the sciences which have to do with living beings, whether in the vegetable or animal kingdom, must rest their claims rather upon the fidelity of their descriptions,

and the soundness of their classifications, than on the fulfilment of their predictions or the power which they can exert. The knowledge which they have acquired by the observation of many individuals differing widely from each other, cannot be applied with certainty to the individuals themselves, but only to groups of individuals similar to those which first supplied the knowledge. And that which is true of the plant or the animal, is true of individual men as members of society. It is from groups of persons that we obtain our knowledge; it is to like groups that we apply it. We cannot, therefore, refuse to the Actuary who first collects and arranges facts relating to the duration of human life, and then calculates the expectation of life, the title of a man of science, for no better reason than that his calculations possess the high utility of which I have been speaking, not when applied to the individual man, but only when brought to bear (as in life assurance) on great numbers of persons. And so must it be with the Statist, in the sense in which I would use the term. He collects and arranges his facts, calculates their average value, marks, in some cases, their extreme values, and would make application of his knowledge to the groups or classes to which the facts relate, but that the right and power of action rests with the State and not with him. But the fact that the results which he obtains are applicable in practice not to individuals but to classes, and the accident, so to speak, which separates the discovery of truth from the power of applying it, cannot destroy the dignity of his pursuits nor rob statistics of its right to take rank among the sciences. And if, as in the case of chemistry, to which I have already adverted, the claim to be called a science rests on more attributes than one, this same claim may be set up on behalf of statistics: for we, too, have our classifications and our nomenclature; we, too, have our numerical method; we, too, have powerful instruments of analysis in our tabular forms; we, too, have the most universal and subtle of all the means of discovery, the power of eliminating disturbing elements, of establishing numerical equalities, and exhibiting residues as containing the cause or causes which made two or more numerical statements to differ from each other. We largely use the true Baconian method of induction, and Lord Bacon's own favourite instrument the *Tabula inveniendi*. Lastly, of the utility and dignity of our pursuit there cannot be a doubt.

From these considerations, then, I infer that there is a SCIENCE OF STATISTICS—a science worthy of respect, encouragement, and support—a science of which the members of this Society may be justly proud—a science to which States and nations need not be ashamed to acknowledge their obligations.

The question of the relation which this science of statistics bears to Social Science and Political Economy, is the only one which,

according to the title of this paper, remains to be discussed. My answer to this question will be anticipated from what has gone before. The science of statistics is a comprehensive science, of which "social science" and political economy are only branches or departments. The original prospectus of this Society, already quoted, did really establish a Social Science when it stated as its object the procuring, arranging, and publishing of "facts calculated to illustrate the condition and prospects of society;" while Professor Sedgwick spoke of the Statistical Section of the British Association, to which, as I have shown, this our Society owes its origin, as dealing with "matters of fact," "mere abstractions," and "numerical results," which were to furnish "the raw material to political economy and political philosophy;" by which, as he thought probable, "the lasting foundation of those sciences might be ultimately laid." So that this Society may be said to have from the first cultivated both social and political science in the only satisfactory way—by the accumulation of facts. The fact that a Society calling itself the "*Social Science Association*," has within a few years come into existence, does not in any way invalidate our claim to have first set on foot, in fact, though not in express terms, a social science; nor, if we were to lay claim on our own behalf, to the exclusive cultivation of that science, should we do any injustice to the younger society. For it is obvious that the work done by the Social Science Association, excellent as it is, is not in the nature of science. It may be described, without injustice, as a Social Reform Association, encouraging the discussion of alleged social evils, inviting publicity, and taking practical steps, by means of memorials, petitions, and deputations to men in authority, to promote legal and social reforms. To the members of that Association, and to all other men, we offer the services of a social and political science, slowly and painfully constructed on the basis of facts laboriously brought together, but upon the collection, arrangement, tabulation, and analysis of which we bring constantly to bear the pure bright light of scientific method. We do not allege that there is no other way to social reform and improvement but this toilsome path of ours; we know that many financial, social, and legal habits, arrangements, and procedures may be convicted of folly, inconvenience, and injustice, without the use of a single figure of arithmetic; but we also know that in almost all disputed questions, our aid is invoked, because we are believed to collect, arrange, and classify our facts in the true spirit of science, calmly and impartially, having as our primary object the discovery of truth by facts, and not the redress of grievances.

But it is time that I bring this communication to a close. In doing so, I trust that I may lay claim to some success in my attempt to give increased dignity and importance to this Society, and a new

interest to the labours of its members. For myself, at least, I may say, that in offering to the Society a long series of communications on which I have bestowed much labour and thought, I acted in the belief that I was contributing to the gradual, slow growth, not of heaps of facts without reference to their use or application, but of a veritable science, social and political—a science with a definite aim, an orderly classification of subjects, a numerical method with its strict rules of synthesis and analysis—something more than the *Statistik* of Achenwal, nothing less than "the political economy and "philosophy" of Sedgwick; a science which I believe it to have been the real aim of our founders to establish when they announced their intention to illustrate by facts the condition and prospects of society. I hope also to be forgiven if I so far ignore the rude conceptions of our original prospectus, as to indulge in the luxury of "opinions," and to respect the now disused motto which bids me bind up my sheaves of wheat for others to thresh out, rather as a venerable relic of the past, than as a principle of action to be at this moment implicitly obeyed and acted upon.*

* I append a tabular sketch of the chief divisions of Statistics recognised in the original prospectus of the Society,—a prospectus drawn up by Henry Hallam, Charles Babbage, Richard Jones, and John Elliot Drinkwater, constituted a provisional committee for the purpose. The committee did not point out distinctly the subdivisions of medical statistics. They are assumed to be the two printed in a distinctive type.

Economical—

1. Natural productions and agriculture of nations.
2. Manufactures.
3. Commerce and currency.
4. Distribution of wealth (rent, wages, profits, &c.).

Political—

1. Facts relating to the elements of political institutions, the number of electors, jurors, &c.
2. Legal statistics.
3. Finance and national expenditure, civil and military establishments.

Medical—

1. (? **Preventive Measures**).
2. (? **Curative Measures, Hospitals, &c.**).
3. Population.

Moral and Intellectual—

1. Statistics of literature.
2. Education.
3. Religious instruction and ecclesiastical institutions.
4. Crime.

On the Progress *of the* Small Arms Manufacture.

By J. D. Goodman, Esq.

[Read before Section F, British Association, at Birmingham, September, 1865.]

From the earliest times there is little doubt but that the smiths of Birmingham were renowned for the production of swords and pikes and other similar weapons, but it was not till the close of the seventeenth century, as we hear from the often-quoted Mr. Hutton, that William III, at the suggestion of Sir Richard Newdegate, at that time one of the members for Warwickshire, employed certain manufacturers of the town to supply a quantity of arms for the Government service. Macaulay states that in 1685 the population of Birmingham was only four thousand, and at that day, he says, nobody had heard of Birmingham guns. Previous to this time England had obtained her supplies from the Continent, doubtless chiefly from Liége. The gunmakers of Liége claim for their city the honour of being the most ancient seat of this manufacture. It is stated that in the principality of Liége it dates from the middle of the seventeenth century, when cannon were first introduced. Hand guns were invented about 1430. We hear of their being brought to England by Edward IV, when he landed at Ravenspur, in 1471, bringing with him 300 Flemings armed with hand guns. The match-lock was an improvement shortly afterwards adopted. This was followed by the wheel-lock, which was invented about the time of Henry VIII, and remained without change till the reign of Charles II, when it was superseded by the flint-lock. It was a demand for this gun, a few years later, by William III, that first introduced the manufacture into Birmingham. As the following letter may be regarded as the foundation of what has grown into one of the most important industries of the town, I make no apology for reading it at full length :—

"From Ch. Myddelton, Off. of Ordnance, For their Mats. Service, to Sr. Roger Newdigate, att Arbury, near Warwick.

"These—

"Sr—Pursuant to an order of this Board, We have directed the sending to you by the Tamworth Carryer 2 snaphance Musquetts of differing sorts for patterns, desireing you will please To cause them to be shewed to ye Birmingham Workemen, and upon yor. returne of their ability and readiness to undertake the making and ffixing them accordingly—Or the making Barrells or Locks only, Together wth. the tyme a sufficient Quantity of Barrells can be made in to answer the Trouble and Charge of sending an Officer on purpose to prove the same according to the Tower proofe which is the Equall weight of powder to one of the Bullett alsoe

sent you and their Lowest price, either for a compleat Musquett ready fixd or for a Barrell or a Lock distinct or together as they will undertake to make them. We shall thereupon cause further direction to be given as shall be most beneficiall for their Mats. service with a thankfull acknowledgement of yr. great favour and trouble afforded us herein.

"We are,
"Sr.,
"Your most humble servant,
"CH. MYDDELTON."

"Office of Ordnance, 10th of January, 1689.
"J. Gardiner, Jos. Charlton, Wm. Butler."

Note by the late Sir Roger Newdegate, Bart.:—
"Before, all the guns for the Army were imported from Germany."

The term snaphance used in this letter is derived from the troops who made use of it. These were a set of marauders whom the Dutch termed "snaphans," or poultry stealers. The use of the matchlock exposed them on their marauding expeditions to this inconvenience, that the light from the burning match pointed out their position. They were unable to provide themselves with wheel-lock guns on account of their expense. In this dilemma they formed the snaphance from a study of the wheel-lock. The guns ordered from the Birmingham makers, although retaining the name, were of course an improvement on the original snaphance, and were no doubt a near approach to the flint-lock of modern times.

The first trial of the skill of the Birmingham men having resulted satisfactorily, we find that an order was afterwards transmitted to five manufacturers, Messrs. Wm. Bourne, Thomas Moore, John West, Richard Weston, and Jacob Austin to provide 200 snaphance muskets per month, for which they were to receive, on delivery of each hundred muskets 17*s.* each, ready money, in one week after delivery in the Tower of London, and that they were to be allowed 3*s.* for the carriage of every one hundred weight. This document bears date 5th January, 1693.

We have little or no information to guide us in tracing the progress of the manufacture till the commencement of the present century, when the military records enable us to ascertain the capabilities of the trade at that period, to which I will hereafter refer. Before referring to these figures, it may be interesting to trace the system at present pursued in carrying on this manufacture in Birmingham at the present time.

The manufacture of the various parts of the gun, as barrel, lock, &c., are distinct trades. These several parts are collected by the manufacturer, known as the gunmaker, and by him are set up.

The chief branches are as follows:—Stock making, barrel making, lock making, furniture making, oddwork making; and for military guns there are in addition, bayonet making, sight making, rammer making.

The stocks are of two kinds—beechwood and walnut. They are brought to Birmingham, cut from the plank into the form of the gun. Beech stocks are grown in this country, chiefly in Gloucestershire and Herefordshire. Walnut stocks are, with few exceptions, imported from Italy and Germany. One Birmingham contractor, to meet the demand occasioned by the Crimean war, established saw mills in Turin, and since that period has converted into gun stocks nearly 100,000 walnut trees. He has left but few sound walnut trees standing in the district in which he carried on his operations. The greater part of the supply was obtained in Piedmont, and smaller quantities from Ferrara, Bologna, and Modena. An average size tree yields about thirty gun stocks; those cut from the heart of the tree are most valued, and are used for first-class military arms and the best sporting guns. About one stock in five or six can be obtained "all heart;" the remainder are "sap and heart" and "sap."

Barrel making is quite a distinct trade. For the manufacture of military barrels a somewhat large plant of rolling, boring, and grinding machinery is required. No barrels are made in England, except in Birmingham and its immediate neighbourhood.

The invention of making gun barrels by means of grooved rolls is due to a Birmingham manufacturer of the name of Osborne. It was on the occasion of a strike of the barrel welders that he was led to make the experiment. He was not allowed to introduce his system without opposition, for no sooner were his rolls set to work, than twelve hundred barrel welders, each armed with his forge hammer, proceeded to the private residence of Mr. Osborne, in the Stratford Road, threatening its destruction. The military were called out before the disturbance could be quelled, and for many days afterwards a guard was placed over the mill in which the work was carried on.

Gun locks are made in Birmingham, and, on a still larger scale, in the neighbouring towns of Darlaston and Wednesbury.

Furniture, under which head are included the heel-plate, trigger-guard, &c., is made either of brass for military guns, or cast iron for common sporting guns, or forged iron for the better qualities.

The odd work, consisting of screws, pins, swivels, &c., is produced in Birmingham by manufacturers, who make also sundry implements connected with the trade, such as turnscrews, nipple keys, lock vices, &c.

The bayonets required for the military trade, form an important branch: they are made in Birmingham and West Bromwich. The sword bayonet, which has been largely adopted, is generally produced by the same manufacturers.

Scabbard making is a distinct branch; scabbards are of two kinds, steel and leather.

On reference to the directory of the present year, we find 599 names of manufacturers engaged in the different branches of the trade. Of these 174 are gun makers. Of the remainder the greater number are makers of different parts of the gun. Others again are workmen, such as stockers, finishers, engravers, &c. These are of the class who are out-workers, employing a few assistants, and work at the same time for different masters.

Gunmaking, or "setting up," is again very much subdivided. It is only in the more important establishments that all the branches are carried on on the premises of the gunmaker. More or less, out-workers are engaged in every branch. This system makes it extremely difficult to obtain a correct estimate of the number of workmen employed in the trade. Probably no master can tell how many hands he is employing at any given time, and the number varies from month to month with the demand. About ten years ago an endeavour was made to ascertain the number of hands engaged, and as the workmen themselves assisted in the inquiry, it was at the time, no doubt, a tolerably correct estimate. The number is less than at the present time, and probably it does not represent more than half the number called into requisition by the American demand during the war. With trifling exceptions women are employed only in one branch, that of "making off," or giving the final sand-papering and polish to the stocks, a light and not unsuitable employment. A few women are employed in polishing and barrel-boring. It is difficult to say why such work has fallen into their hands, as it is both dirty and laborious.

The list of workmen employed estimates the total number at 7,340. Of these 3,420 are engaged in producing the materials, the barrel employing 700, the lock 1,200, the bayonet 500, and so on.

Setting up these materials into guns employs 3,920 men. Of these the three chief branches are the stockers, screwers, and finishers. Each of these branches, with its sub-branches, is estimated to employ 1,000 men. The stocker lets the barrel and lock into the stock, and roughly shapes the stock. The screwer lets in the furniture and remaining parts of the gun, and further shapes the stock. The finisher takes the gun to pieces, and distributes the several parts to the browner of the barrel, the polisher, the engraver, &c., &c., and when they are returned he puts the gun together, and finally adjusts the several parts.

The out-working system leads to the employment of a considerable number of young boys, who are employed mainly in carrying the work from one to another as it passes through its several stages.

No very correct estimate can be given of the rate of wages

earned by the workmen in the gun trade. With very few exceptions the work is paid for by the piece, and the rate varies considerably with the demand. During the past ten years there is little doubt but that the wages earned in this trade have probably exceeded those in any other. Several branches require very high skill, and the remuneration is in proportion; for instance, barrel-boring and setting, stocking, rifling, lock-filing, &c. A judgment can be formed of the delicacy of workmanship required in the first of these branches, when I state that a military barrel has to be bored with such truth that it must receive a plug measuring 577 thousands of an inch, and is condemned as useless if it take one of 580. A workman in this branch, in full employment, has frequently been known to earn his 5*l.* to 6*l.* a-week.

It is a very common practice in many of the branches for a workman to employ several assistants, whether working in the factory of his employer or as an out-worker; such men, while paying those under them at the rate of 5*s.* to 10*s.* for boys, and 15*s.* to 25*s.* to adults per week, will take for their own share several pounds. A workman is held to be an inferior hand who, in any of the skilled branches cannot earn, single-handed, 30*s.* per week. It must be admitted that in many cases the high wages confer little benefit—the money is frequently wasted, and bad habits encouraged; but, on the other hand, many are known to have saved money. Workmen in this trade will be found enrolled in one or other of the freehold land societies of this town, and living in houses of their own. The recent bank failure in Birmingham discovered savings which were little known before. In one case a finisher who had steadily remained in the employment of one master for twenty-five years, was found to have no less than 800*l.* lying in the bank.

Strikes have occurred in the gun trade, but happily not frequently. The gunmakers engaged in the military arms trade are associated together, one object being the regulation of wages to be paid to workmen. The men, in like manner, act together, the respective leading branches having their own organisation. Masters and men each know the strength of the other, and have on the whole so arranged their mutual dealings as to avoid disputes.

A serious strike occurred in 1859, which lasted nine weeks. It was finally settled by arbitration. With that exception, during the last ten years, but few difficulties have occurred.

The Birmingham workmen are much more highly paid than those of Belgium and France. We find it stated in evidence given by French gunmakers before a Government commission, appointed to inquire into the state of the gun trade of France in 1860, that the average earnings of the French workmen were 3 frs. to 3 frs. 50 cents per day, or 14*s.* 3*d.* to 16*s.* 7*d.* per week. The same witnesses stated

that in Liége the average earnings were 2 frs. 50 cents per day, or 12*s*. per week, but they included the earnings of women and children; and as they were seeking protection for their own industry, were probably disposed to underrate the wages paid by their Liége competitors.

A recent report by Mr. Barron, Her Majesty's Secretary of Legation at Brussels, describes the workmen engaged in this trade as being in anything but a satisfactory position. He says of those employed in setting up the guns, that "it is not surprising if they "live in a state of chronic pauperism. They are generally ill-lodged, "ill-provided with tools, stinted of air and space. It is common to "see a stocker or a setter up obliged to work and sleep in the same "room, surrounded with a family, and perhaps a hundred guns."

This low price of labour gives our Belgian rivals a great advantage; on the other hand, the better paid and better fed English workman can accomplish an amount of work considerably in advance of his Belgian workfellow; and the English manufacturers possess a further advantage in the more extended application of machinery, the use of which in Liége is discouraged by the cheap rate at which hand labour can be obtained.

The Birmingham gunmakers have long been aware that a more extensive use must be made of the advantages which they do possess, and this has led to the erection in Birmingham of an establishment for the manufacture of guns by machinery, on the interchangeable principle. We must give America credit for the introduction of this system. It was from thence that it was brought into this country. The attention of the English Government was first called to the subject by a commission, of which Mr. Whitworth and Mr. George Wallis, late head master of the Birmingham School of Art, were members. They visited the United States in the summer of 1853 for the purpose of inspecting the New York Exhibition, and while there, they extended their inquiries by visiting several establishments, among others the Government Arms Factory at Springfield. Their report induced the Government to determine on the establishment of a manufactory at Enfield on the same system as that pursued at Springfield.

Before this resolution was carried out, the subject was warmly debated in the House of Commons. Mr. Newdegate, Mr. Muntz, Mr. Geach, Lord Seymour, and other members, strongly insisted on the impolicy of Government entering into competition as manufacturers with the private trade of the country, and it was agreed that a committee should be appointed "to consider the cheapest, "most expeditious, and most efficient mode of providing small arms "for Her Majesty's service." An opportunity was afforded to the gunmakers to give evidence. The result was that the committee

recommended that the factory should be carried out only on a modified scale. The breaking out of the Crimean war shortly afterwards, however, led to this recommendation being disregarded, and the factory at Enfield was erected on a scale even larger than that originally contemplated. A second commission was sent over to the United States, with instructions to inspect the different gun factories in that country, and to purchase such machinery and models as might be found necessary for the proposed factory at Enfield.

The manufacture of small arms by machinery, owes its origin to the invention of a lathe for cutting irregular forms, which is due to an American of the name of Blanshard, a machine which the commission found had been used very extensively for about thirty years in the turning of shoe lasts, boot trees, oars, spokes of wheels, gun stocks, &c.

This machine was first used in the Springfield armoury about twenty-five years ago. It serves to give only the external form to the stock. It was a work of time before other kinds of machines were perfected which were required for the subsequent processes of letting in the lock, guard, &c., but this was eventually accomplished.

I make no attempt to describe the great variety of processes employed to produce the sixty-two or sixty-three several parts which constitute the gun. It will be sufficient to say that the total number of processes under which an Enfield musket of the pattern 1853 undergoes is upwards of 600. Guns made by this system will interchange ; that is, that any part of one gun will fit another.

The factory of the Birmingham Small Arms Company, to which I have alluded, is now in working operation. The system is there carried out in its full integrity. It has been planned on a scale to produce a thousand guns per week. There are upwards of 300 machines at work, but at present it has not reached its full power. The number of guns now made there is about 500 per week.

The proving of barrels, with a view to the security of the public, is a subject which has received the careful attention of the legislature. In 1637 a charter was granted by Charles I to the gunmakers of London, for proving all manner of guns made within ten miles of London.

In Birmingham the proof of barrels was left to each individual manufacturer, till in 1813 a public proof house was erected in Banbury Street, and an Act passed rendering compulsory the proving of all barrels made in England, either at the proof house of London or Birmingham. A second Act, giving more extended powers, was passed in 1815.

These regulations worked well for Birmingham, and the security which was felt in English guns materially aided in obtaining for our trade the high reputation which it enjoys. No change was made in

the system pursued till 1855, when the inventions of modern times called for fresh regulations. They were embodied in an Act of Parliament passed in that year, which remains still in force. The security of the user was very greatly increased by the provisions of this Act. Under the previous one, barrels were proved only once, and that in a rather early stage of manufacture. It followed that certain descriptions of guns, as, for instance, rifles when grooved, and double guns when jointed together, were weakened after proof, and sometimes rendered unsafe. The present Act requires that all such barrels shall be proved twice, once "provisionally," as the Act terms it, and a second time "definitively," when the barrels are in a finished state, ready for setting up. The first proof may be regarded as for the protection of the gunmaker, to secure him from the loss that would arise from bestowing his labour on an unsound barrel; the second proof protects the user.

Under this Act the gun trade is recognised as an associated body, to which all are entitled to belong who carry on the trade within ten miles of the borough of Birmingham, and who are rated to the poor at not less than 15*l*. A fee of a guinea is paid annually on registration. The trade is required to meet on the 9th of March in each year, when they elect the managers of the proof house.

I will now pass on to the amount of production in this country; and fortunately for purposes of accuracy I am enabled to refer to reliable statistics, giving the precise number of guns produced. I obtain this information from the several proof house returns, which have been most kindly placed at my disposal by the Government Superintendent of Small Arms, and by the authorities of the proof houses of London and Birmingham.

Before entering upon the recent statistics, I will refer to the information which we possess relating to the supplies produced at the commencement of the present century during the Peninsular war.

From a return published shortly after that period of the number of barrels made for the Government in the years 1804 to 1815, I find the total to be 3,037,644, or an average number of 253,137 annually. In 1804 the number produced was 80,000; it steadily increased up to 1813, when it reached 490,000 in that one year made for the Board of Ordnance alone.

During this period Birmingham produced barrels and other materials for the India Company, amounting to a million. This makes the total number of arms made in the twelve years somewhat over four millions, or 1,074 per working day. A large number of these materials, manufactured in Birmingham, were made up into guns by the London gunmakers.

To verify the traditional "gun a minute," said to have been the

production of Birmingham during this war, we require 1,440 guns per day, or 525,000 per year. For this we must confine ourselves to the two highest years, 1812 and 1813, which produced respectively, including the India Company's supply, 581,682 and 654,450.

It will be instructive to compare with the results now given the production of the French Government during the same period. The information is obtained from returns published in 1822, by M. Dupin, a field officer in the French service.

During the years 1802 to 1814, a period of thirteen years, the arms manufactured by France numbered 2,456,257, or about 200,000 annually. This number gives us for every working day 604 guns. The number made in England, it will be recollected, being 1,074 per working day. At this time, it must be borne in mind, that France had at her command the resources of Liége and Turin, in addition to her own. St. Etienne, the most important seat of the arms manufacture in France, supplied 754,000, while Liége produced 279,900, and Turin 107,000. Seven other towns supplied the remainder.

With reference to the recent production of guns in our own country, I have collected the statistics of the last ten years, from 1855 to 1864.

The total number of guns and pistols proved in England during this period was 6,116,305. Of this number there were proved at the Birmingham trade proof house, 3,277,815; at the Government proof house in Birmingham, 978,249 (these last represent military guns made for the English service); at the London proof house, 1,355,139; and at the Enfield factory, 505,102. The Enfield factory has only been in operation seven years.

The average annual production will thus be:—

Birmingham trade proof house	327,781
,, Government proof house	97,824
London trade proof house	135,513
Enfield proof house	72,154
Making a total annual production for the whole of England of	633,272

I have stated that at the Government proof house, in Birmingham, 97,000 military guns were annually proved, but these were not all made up into guns in Birmingham. The number includes those set up in London. The annual number divides itself into—

Birmingham	59,560
London	38,264

I have prepared tables showing the classification of the various

descriptions proved at the Birmingham proof house. This will be published in the volume of reports on local industries, but I will not trouble the Section with the details. I may state that the proof house returns show that the proportion of barrels which fail in proof is as follows:—

	Per Cent.
Twisted barrels	5·67
Plain iron	4·57
Twisted military	1·20
Plain iron	1·35
Pistols	2·73
Average of all descriptions	4·15

It is difficult to give an idea of the range of prices of guns, as the variety is so very great. There is one gun, however, of which neither the quality nor the pattern has changed for many years past, and which will serve as a barometer for the chief branches of the trade to indicate the variations in prices. It is the one known as the African musket. These guns are sent to the west coast of Africa, where they are interchanged for palm oil. No ship's cargo trading with that coast, is complete without a supply of them. Probably 100,000 to 150,000 of these guns, made in Birmingham, are annually exported. A table showing the range of prices of this gun, which I may state is the cheapest made in the trade, will be, published in the reports. The prices in the table range from 13*s.* 6*d.*, the highest price in the twenty years, down to 6*s.* 6*d.* In the revolutionary year of 1848, it reached its highest point, from which it fell to 7*s.* in 1852. It rose from that time till in 1854, during the Crimean war, it reached 10*s.* 6*d.* The next highest point was in 1861, when it stood at 11*s.*, since that period there has been a steady fall till it stands at this present moment at 6*s.* 6*d.*, the lowest point touched.

From the returns I have in my possession, I have drawn out as accurately as I possibly can, the number of arms manufactured in Birmingham and elsewhere, for the Americans during the last four years. The first shot was fired at Fort Sumter on the 12th April, 1861. On the 9th May following, five purchasers of arms, some commissioned by different Northern States, others, private speculators, arrived in Birmingham. Each had so well kept secret the object of his mission, that when they found themselves all engaged in Birmingham on the same errand, they suspected each other of purchasing for the enemy, and their anxiety was increased accordingly to secure the few thousand arms that were then in store in Birmingham. The few on hand were at once shipped off, and large orders were given, which continued to occupy the trade at their full power, with one interval, till March, 1863. The interval I allude to was on the occurrence of the "Trent" affair in November, 1861,

which led to an embargo being laid on the export of arms on the 4th December, 1861. This embargo was removed early in 1862. On the removal of the embargo, one steamer took out from Southampton no less than about 40,000 rifles to New York. The trade worked at its full power, straining every nerve till, I find by the return from the Birmingham proof house, that in one month, the month of October, 1863, 60,345 rifle barrels were proved, being very few short of 2,000 per day from Birmingham alone, a number altogether unprecedented in the history of the trade. At that time the supplies produced in America at the Springfield armoury and elsewhere, began to tell upon the demand. We still find, however, that the numbers were 40,000 to 50,000 per month till March, 1863. They then fell to 14,000 per month, till in September, 1863, the Northern demand ceased altogether. Without notice the orders were suspended, and guns that had been sent over, were even returned to this country. The United States Government found at that time their factories were equal to supply the whole demand.

From the proof house returns I obtain the following numbers, showing the extent of the supply of arms from this country to America:—

Birmingham supplied	733,403
London	344,802
Making a total number of Enfield rifles sent to America of	1,078,205

The figures now brought before you, have shown what Birmingham is capable of producing; but we must not wrap ourselves up in a mantle of self-satisfaction, and shut our eyes to what can be done elsewhere. It will not be uninteresting to the Section, nor uninstructive to the gunmakers of this town, if we glance at what is being done by our competitors at Liége.

We have seen that during the last ten years the total production of England was upwards of six millions; but before we make a comparison with the Liége trade returns, we must deduct the number of arms made at the Enfield factory. This will bring our total to 5,611,203. The production of the Liége trade during the same ten years, according to their proof house returns, was 6,842,264, or something more than a million in excess of our make. It must be understood, however, that while the aggregate number produced in England is 17 per cent. less than that of Liége, the aggregate value of the English arms is greater. The Belgians make a very large number of pocket pistols at 1*s.* –½*d.* to 1*s.* 11*d.* each pistol. The proof house returns show that in ten years the number of pocket pistols proved was 2,305,176—more than one-third of the entire make of Liége. In the English returns we have only 588,477

pistols, or little more than one-tenth, and none of these are sold at anything like the prices of the common pistols of Liége. As the demand for English work runs on superior qualities, the English makers have never attempted to make pistols of this very low class.

We are enabled to arrive at a fairly accurate estimate of the value of the arms made by reference to the Customs' returns, which give us the number exported and their value. I have taken for my calculation the years 1857 to 1864 inclusive, as for those years I have also the value exported of Belgian guns, which is necessary for comparison. During those years the number of guns exported from England was—

Number of guns	2,685,309
Declared value of ditto	£4,552,628
Value of each gun	£1 13*s.* 10*d.*

During the same years we have the Belgian value exported, but not the number of guns. I am obliged to assume that Belgium during those years exported as many of her entire make as England, although, in truth, she no doubt exported a greater proportion, as we may be sure that the home consumption of Belgium would not be equal to that of England. The following statement will show the number of guns made and exported. The military guns made by the English makers for their Government, are excluded from the calculation :—

Number of guns made in England for ordinary trade	3,822,457
Of this number England exported	2,685,309
Number of guns made in Belgium for trade	5,390,675
,, assumed to be exported by Belgium	3,760,450
Declared value of Belgian exports	£4,743,296
Value of each gun	£1 5*s.* 2*d.*

The arms manufactured by the English trade for Government use, I estimate at 3*l.* each. This is somewhat below the real value, but it will be near enough for our present purpose. These data will give us the following results as the value of the production of the two trades during the ten years 1855 to 1864 inclusive :—

Belgium—		
Number of guns, at 25*s.* 2*d.* each		6,842,265
Total value of Belgian guns		£8,609,849
England—		
Number of guns, at 33*s.* 10*d.* each		4,632,954
Value of ditto	£7,837,409	
Number of guns, at 3*l.* each	—	978,249
Value of ditto	2,934,747	
Total number of English guns	—	5,611,203
Total value of English guns	£10,772,156	

Although the value of our trade is thus shown to be more than equal to that of the only source of supply which at all approaches us in the extent of manufacture, it is manifest that the Birmingham gun trade must be on the alert if it is to maintain its ground. To contend against the cheap labour of Liége is not an easy task. The establishment of the machine factory, we hope, is a step in the right direction. It will secure for the town the trade in the highest class of military work, which otherwise would have gone to our competitors. Excessive prices for labour are still paid in certain branches of the work, particularly when sudden pressure comes upon the trade. A more uniform rate of wages would benefit all parties; the master would feel more confidence in tendering for contracts at moderate rates, and the workmen would secure more regular employment. I hope the facts now produced, and which will subsequently be given more in detail, will serve to call the attention of the trade to points so closely affecting its future progress and well doing.

On the Benefit Building *and* Freehold Land Societies *of* Birmingham. *By* G. J. Johnson, Esq.

[Read before Section F, British Association, Birmingham, September, 1865.]

The fact which appears from the subjoined tables, that since the year 1842 an amount of nearly 2,500,000*l.* has been paid, chiefly by the working and lower section of the middle class into building and freehold land societies in Birmingham, justifies the compilation of a paper illustrating this branch of the economic progress of the town. At the outset I have gratefully to acknowledge the ready and courteous manner in which the secretaries of the various societies answered my inquiries, some of which involved troublesome searches into the books and accounts of societies which have been long since wound up. By their assistance I am able, in the four tables appended to this paper, to present an account of these societies as nearly complete as the circumstances will admit of.

Table I is a list of all the enrolled societies in Birmingham from the passing of the Act for the regulation of building societies (14th July, 1836) to the present time.

Table II gives a list of all such societies as have terminated or been wound up *without loss* to the members.

Table III gives a similar list of societies which have ended in *loss* to the members.

Table IV contains a list of the existing societies, with the statistics of each.

Commencing with Table I, it will be noticed that the first society there named was formed in 1835, before the Benefit Building Societies Act, although subsequently registered under that Act. It was a building club of a type not uncommon in Birmingham sixty or seventy years ago.* The objects of such clubs were similar to those of a modern land and building society, except that instead of buying land, it was taken on long building leases by the trustees and sublet to the different members. Such building clubs differed from the modern building societies enrolled under the Act of 1836 in two important particulars, viz., 1. Building clubs were merely private partnerships, subject to all the inconveniences of a large partnership; and, 2. Their benefits were confined to intending builders, as there was no adequate machinery for the investing

* A large number of the houses in Islington Row, Cheapside, and Woodcock Street, were built by this means.

branch of the business of modern societies, which has made them the savings banks of a large number of the working class.

The society in question was a good specimen of the class. It had twenty-five members, and eight of them obtained houses and the others a money equivalent. The next society, formed some years after, was not a building society in the usual sense, but a society for building a public hall, registered under the Act from some supposed necessity or benefit. It was not until the year 1842 that the first proper benefit building society was formed in Birmingham. Between that time and the year 1862, when the last formed building society was registered, no less than forty-two building and land societies have been established and enrolled. No year between 1842 and 1862 passed over without the establishment of some new society, and in some years, *e.g.*, in 1846, as many as six such societies were projected.

All the earlier societies, up to the year 1846, were established on what is called the "terminating principle," *i.e.*, the members continue paying until the amount paid and the accumulated profit makes up all the shares to the prescribed amount (generally 120*l.*), when the object of the society is accomplished, as regards each member, at one and the same time, and the society is "up." It is obvious that this involved either that all the members should begin paying at the formation of the society, or that any member entering subsequently to the rest, should pay such a sum as would be equal to the payments and profits of an original member at the time of such subsequent entrance.

This became a serious inconvenience in the later years of a terminating society, and the consequence is that most of the modern societies (twenty-eight out of the thirty-five societies established since 1845) have been founded on the "permanent principle." On this principle the *society* always continues, it is only *membership* of the individuals composing it which terminates. When any particular member's payments, together with his share of profits during his period of membership amounts to 120*l.*, or whatever may be the prescribed amount of the share, he must be paid out if he is an investor; if he is a borrower, he must continue to pay until not only his 120*l.*, but also the premium he agreed to pay for the advance of that sum is made up. The advantages of this permanent plan are numerous, *e.g.*, the members can join at any time without paying any arrears, and the proportion between borrowers and investors is steadier than in terminating societies.

Besides "terminating" and "permanent" societies, it will be noticed that five of the societies in Table I are freehold land societies. In a freehold land society land is bought by the trustees and sold in small allotments to the members, who thereupon obtain

an advance from the society as a building society in the ordinary way, by which the trustees are reimbursed, and the land alone, or the land and a house upon it, as the case may be, is thus gradually redeemed by the member. The first freehold land society in Birmingham was established by Mr. James Taylor, jun., whose name has now for nearly twenty years been identified with similar societies throughout Great Britain.

Referring now to Table II, we find that out of the societies in Table I, eight have been terminated successfully, and four have united with existing societies, and two have been voluntarily wound up, in all cases without loss to the members. It is very difficult to get at accounts which have been closed for many years, but the following figures may be relied on as showing the profits made by successful building societies. The first building society, formed under the Act in June, 1842, terminated in September, 1853, having run eleven years and three months.

	£	*s.*	*d.*
In that period each subscribing member had actually paid	75	14	8
And was entitled for interest and share of profits to.....	44	5	4
Making up his share of	120	–	–

The next society, the Birmingham Building Society No. 2, began in January, 1845, and terminated in October, 1856, having run eleven years and nine months.

	£	*s.*	*d.*
In that period each investing member had actually paid	79	1	–
And was entitled for interest and share of profits to.....	41	19	–
Making up his share of	120	–	–

The payments in each case for an investor being 2*s.* 6*d.* per week per share, and for a borrower double that rate.

In Table III will be found such particulars as could be obtained of the unsuccessful building societies. Some one or two of the societies mentioned in Table I, about which no information could be obtained, should no doubt be entered in this list; but making allowance for these, it is gratifying to notice how small a proportion the *un*successful societies bear to the others, both in number and the actual amount of business done.

In the largest unsuccessful society, the members received back 19*s.* in the pound on the amount they had actually paid in, not reckoning interest. In the other cases the loss to those members who continued to be so up to the time of stoppage was total or nearly so. The cause of failure in all the cases was the same—lending money on insufficient security, second mortgages, and other bad

investments. Many other societies suffered heavy loss from the same cause, and for the most part by the same persons whose misconduct led to the stoppage of the societies in Table III. These failures had one good result: for some years building societies had been so uniformly prosperous that the members omitted to exercise a proper vigilance over their administration: but losses by bad investments, and the embezzlement of a large sum of money by a person who held a prominent position in several societies, have made both committees and members more careful. It is fair to notice that the case just alluded to is the only instance of fraud by any official of a building society in Birmingham.

To sum up the results of the operations of these societies in Birmingham, it will be seen that adding together—

	£
The amount received by the societies which have terminated successfully (Table II)	77,858
And the amount received by the societies which have failed (Table II)	13,800
And the amount received by existing societies (Table III)	2,242,968
Makes a total of money which has passed through these societies of	2,334,626

Not taking into account ten societies of which it has not been possible to obtain returns. Supposing each of these societies to have received an equal amount to the average receipts of the four successful and four unsuccessful societies in Tables II and III, *i.e.*, about 11,200*l.* each, that would give 112,000*l.* more, which, added to the preceding total, makes 2,446,616*l.*

At the present time the total number of members of the existing societies is 11,193.

The amount now due on mortgage is 539,732*l.*

The amount due to investors, 438,043*l.*

To these figures ought to be added a sum of at least 60,000*l.* lent to these societies on deposit notes repayable at short notice. In consequence of Mr. Tidd Pratt having for some time past refused to certify rules containing borrowing powers, these deposits are not so large as they once were, and it is difficult to get at the exact amount. The returns in Table I are, for that reason incomplete, and there is good reason to believe that if they were complete they would show at least 13,000*l.* more.

Such being the general results of these societies in Birmingham, the next point for consideration is, what are the benefits to the members individually.

As to Investing Members.—In a well-managed society they will receive at least 5*l.* per cent. compound interest, on the amounts paid

in. In the Birmingham societies the shares are generally 120*l.*, and the payment for investors 5*s.* per fortnight per share. These payments, at 5*l.* per cent. compound interest, would make up 120*l.* in fourteen years, supposing there were no deductions for management expenses and no losses. But to the interest paid by borrowing members, there has to be added the premium the latter pay on the advance of their shares, and this, in some of the older societies, was so considerable as to shorten the time at which the members' shares were made up, from fourteen years to twelve years, or less. In the two terminating societies noticed just now, the actual payments of the members, instead of 90*l.*, as they would have been, if the society had run fourteen years, were, in one case, 75*l.* 14*s.* 8*d.*; and in the other, 79*l.* 1*s.*

In an existing permanent society which began in 1853, the first members' shares were made up 120*l.* in April, 1865, being about eleven years and a-half, in the course of which, each such member had paid 74*l.* 3*s.* 4*d.* only. Of course, this scale of profits implies a proportionately high rate of premium paid by borrowers. These very high premiums, such as 40*l.* a share, are not now obtainable, several of the more modern building societies having adopted the scale of 12*l.* premium, and allowing 5*l.* per cent. compound interest only to investors, on this plan the shares are up in little less than fourteen years. It is also to be noticed that most societies get an additional profit by their deposits, by which they are able to lend to borrowers, and earn premiums faster than they otherwise would, by waiting until the subscriptions accumulated. The period at which a share in any given society may be "up," may be dated to be from twelve to fourteen years, according as the premiums are larger or smaller, or the losses few or frequent.

As to Borrowing Members.—As soon as a member gets his share advanced to him, his subscription is increased in most societies to double an investor's contribution. For instance, if an investing member pays 2*s.* 6*d.* weekly for a 120*l.* share, a borrowing member will pay 5*s.* This addition, 2*s.* 6*d.* a-week—6*l.* 10*s.* a-year, is all appropriated as interest on the member's 120*l.*, which makes the interest more than 5*l.* per cent. On the other side of the account, however, the original 2*s.* 6*d.* per week which the borrower pays in as a partner, and not for redemption, also amounts to 6*l.* 10*s.* by the end of the year, and the borrower gets credit for 5*l.* per cent. interest on this from the end of the first year, and the like interest on 13*l.* the second year, and so on. In some societies, the subscription instead of being doubled, is increased from 2*s.* 6*d.* to 4*s.* per week for a borrower, which, of course, is easier to the borrowers *as* borrowers merely, but not so quickly profitable to them as partners.

The advantages by which a borrowing member is more than compensated for the additional interest he pays, are:—

1. He can borrow the whole value of the property instead of the two-thirds which an ordinary mortgagee would advance. If the rent of the property will cover the borrower's subscription, the society is safe, as the claim is a constantly decreasing one.

2. The expenses are much less than an ordinary mortgage. The legal charges are on a fixed scale, and there is no stamp duty, and a simple receipt indorsed re-vests the property in him.

3. He is entitled as a partner with the investing members, to a share of what he pays for premium on his own advance.

Expenses of Management.—The best returns I have been able to get, show that these expenses vary from 5 to 1½ per cent. on the amounts received. These great differences arise from the fact that an almost equally expensive staff is required for a small society as a large one. The secretaries, check stewards, and committee are generally paid, very moderately indeed it is true, but whatever it is, it gives a very different percentage spread over a large return than over a moderate one.

Fresh Legislation Required.—There is one question which has forced itself upon the attention of all engaged in the working of these societies, and that is, whether the time has not arrived for altering their legal status altogether. I have no wish to raise legal questions here, but it is not a legal but an economical question, whether societies having an income, as many of the larger societies have, from 50,000*l.* to 100,000*l.* a-year, ought not to have the advantages of corporate existence as may now be enjoyed by any seven persons who choose, by subscribing a memorandum of association for one share of 1*l.* each, to form a "Joint Stock Company Limited." No one can read the Act of 1836 without noticing that from the preamble declaring "that it was desirable to afford encouragement "and protection to societies to assist the members thereof in obtain-"ing a *small* freehold or leasehold property;" down to the last clause the whole scope of the Act is utterly inadequate to the present condition of these societies. One instance will suffice. It is the theory of the Act that a building society is a small friendly society, the members of which will meet once a week or fortnight. Accordingly, it provides that a general meeting of the members may be called by a notice read at two such meetings. There are, at least, six societies in Birmingham with 1,000 members and upwards—one with more than 3,000. These members pay their subscriptions fortnightly, quarterly, or yearly, and when they go, or more often send to the office for that purpose, it is no more a "meeting" than the shareholders going or sending to pay their calls at a bank is a shareholders' meeting. The facts have outgrown the theory on which the

Act was constructed. The consequence has been that more than once very improper rules have been made at meetings, called in the Act of Parliament mode, which were necessarily unknown to all the members, except the half dozen interested in the object for which the meetings were called.

What is wanted is a recognition that these societies are no longer small friendly societies, but are large investment associations, and are therefore entitled to become incorporated companies.

In the course of the last thirty years the British legislature has slowly and cautiously tried every modification of the partnership principle as applied to associations, and has finally decided that incorporation is the best solution of the difficulties of the question. It is time the same principle was applied to building societies. If they became companies, the now cumbrous machinery of trustees would be dispensed. Trustees do not, in fact, in the larger societies exercise any useful control over the society's affairs, and the changes which necessarily occur embarrass and complicate building society titles. Again, if these societies were made into companies, there would be adequate machinery for voluntary winding-up. Now, unless every member concurs, there is no resource but the Court of Chancery.

TABLE I.—*List of Benefit Building and Land Societies in Birmingham.*

Date of Formation.	Table where Further Information is given.	Permanent or Terminating.	Name of Society.
1835	II	T.	Wheeler Street
'40	No information....	—	People's Hall of Science
'42	II	T.	Birmingham
'43	,,	,,	Borough
'44	No information....	—	Midland Counties Loan Real Property and Accumulating Association
1845	II	T.	Birmingham No. 2
'45	,,	,,	,, No. 3
'46	,,	,,	Midland Counties No. 2
'46	No information....	,,	Standard
'46	IV	P.	Birmingham No. 4
1846	II	T.	Birmingham Equitable
'46	,,	P.	Manchester Order of Odd Fellows
'46	,,	T.	Borough No. 2
'46	IV	P.	Birmingham and Midland District and Investment Association (Athenæum)
'47	,,	,,	The Freehold *Land* Society (enrolled as Birmingham and Midland Counties Benefit Building Society)
1847	II	T.	Warwickshire and Staffordshire
'48	IV	P.	The Counties (*Land* and Building)
'48	,,	,,	Victoria (ditto)
'48	,,	,,	No. 5 Building Society
'49	No information....	,,	Newhall Hill
1849	IV	P.	Borough No. 3
'49	,,	,,	Freeholders
'50	,,	T.	St. Philip's (became Permanent in 1853)
'50	,,	P.	Birmingham Building and Freehold Land
'50	III	,,	People's
1850	No information....	P.	Independent Freeholders and Leaseholders (never went on)
'51	II	,,	Birmingham Town and District Permanent
'52	No information....	—	St. Philip's No. 2 (never went on)
'53	IV	P.	Second Freeholders
'53	,,	,,	Birmingham No. 1
1854	III	P.	Economic
'54	IV	T.	Warwickshire and Staffordshire No. 2
'54	III	P.	No. 3 Midland Counties
'55	,,	,,	Birmingham Equitable No. 2
'55	IV	,,	Professional and Commercial
1855	No information....	P.	Birmingham and Midland Counties
'56	IV	,,	Borough No. 1
'57	,,	,,	United Freeholders
'57	II	,,	Industrial Permanent
'58	,,	,,	Saltley ,,
1859	II	P.	Birmingham No. 3
'60	IV	,,	Friendly
'62	,,	T.	Warwickshire and Staffordshire No. 2
'62	,,	P.	Queen's

TABLE II.—*List of Societies which have Terminated or been Wound-up without Loss.*

Name of Society.	Date of Formation.	Number of Shares Subscribed for from the Commencement.	Value of Shares.	Number of Members who have Entered from Commencement.	Total Amount of Subscriptions Received from Commencement.	Remarks.
			£		£	
Wheeler Street Building Club....	1835	25	—	—	—	
Birmingham Building Society	'42	267	120	204	33,278	
Borough Building Society.....	'43	—	120	—	—	
Birmingham Building Society No. 2	'45	286¾	120	227	31,572	
Birmingham Building Society No. 3	'45	—	120	—	—	
Midland Counties No. 2	'46	—	—	—	—	Merged in Midland Counties No. 3
Manchester Order of Odd Fellows	'46	475	120	150	12,000	Wound up in 1849 without loss
Equitable No. 1	'46	—	—	—	—	
Borough No. 2	'46	—	—	—	—	
Warwickshire and Staffordshire	'47	—	—	—	—	
Birmingham Town and District Permanent	'51	—	—	—	—	
Industrial	'57	—	—	—	—	Merged in "Professional," in June, 1859
Saltley (Permanent)	'58	—	—	—	—	Merged in Friendly Building Society
Birmingham No. 3	'59	108	120	73	1,008	Merged in No. 1 Building Society (Permanent)
					77,858	

TABLE III.—*List of Non-Existing Insolvent Societies.*

Name of Society.	Date of Formation.	Number of Shares Subscribed for from the Commencement.	Value of Shares.	Number of Members who have Entered from Commencement.	Total Amount of Subscriptions Received from Commencement.	Remarks.
			£		£	
People's Benefit Building Society	1850	360	120	190	10,888	Paid 19*s.* in the pound, without interest, in June, 1864
Economic Building Society	'54	260	120	40	2,000	
No. 3 Midland Counties	'54	—	—	—	—	A previous society, "Midland Counties No. 2," was merged in this society in 1856, and this discontinued business in 1856. Total loss to investors at close of society
Birmingham Equitable No. 2	'55	79	120	49	912	Discontinued since December, 1858. Loss not yet ascertained
					13,800	

TABLE IV.—*Existing*

Permanent or Terminating.	Name of Society.	Date of Formation.	Number of Shares Subscribed for from the Commencement.	Value of Shares.	Number of Members who have Entered from Commencement.
				£	
P.	Birmingham No. 4	1846	1,292	120	665
,,	Athenæum	'46	—	120	—
,,	Freehold Land	'47	19,400	30	5,700
,,	Counties	'48	4,404	30	1,236
,,	Victoria	'48	3,444	120	1,442 Buildg. 1,425 Dept.
,,	Birmingham No. 5*	'48	2,097	120	1,760
,,	Borough No. 3†	'49	—	—	—
,,	Freeholders' Building	'49	6,700	120	2,206
T. then P.	St. Philip's	'50	493	120	326
P.	Birmingham Building and Freehold Land	1850 (Land) '59 (Buildg.)	2,000	30 120	1,000
,,	Second Freeholders'	1853	4,870	100	1,397
,,	Birmingham No. 1	'53	—	120	1,780
T.	Warwickshire and Staffordshire No. 2	'54	438	120	60
P.	Professional and Commercial	'55	1,003	120	178
,,	Borough No. 1	'56	204	120	115
,,	United Freeholders'	'57	3,190	100	1,140
,,	Friendly Building	'60	970	100	730
T.	Warwickshire and Staffordshire No. 3	'62	701	120	98
P.	Queen's	'62	91,000	10	3,800
					25,058

* Winding-up. † Winding-up; no return obtainable.

Building and Land Societies.

Total Amount of Subscriptions Received from Commencement.	Land Societies only.		Present Number of Shares Subscribed for.	Present Number of Members.	Amount now Due on Mortgage.	Amount Due to Investors.	Amount of Deposits.
	Amount Expended in Land and Advanced on Mortgage.	Number of Allotments.					
£	£				£	£	£
90,428	—	—	273½	145	11,065	8,386	2,403
78,340	—	—	—	—	18,891	—	9,223
207,000	118,000	3,071	2,067	1,371	23,000	20,700	—
76,000	—	170 acres	3,900	230	16,640	7,760	—
} 288,487	32,000	60 „	—	1,000	53,000 ‡	40,000	—
161,000	91,000	—	81	63	9,300	8,900	—
—	—	—	—	—	—	—	—
229,000	—	—	2,041	1,346	57,000	49,200	—
25,908	—	—	302	144	10,373	7,984	1,718
59,000	50,000	1,355	186½	67	8,100	3,600	3,236
487,000	—	—	1,981	996	37,000	35,800	—
175,965	—	—	2,086	1,050	75,405	64,520	2,120
20,093	—	—	182	13	2,544	2,259	—
45,944	—	—	—	—	63,050	25,493	27,458
5,295	—	—	105	63	5,676	3,829	1,096
120,000	—	—	1,770	839	39,000	37,800	—
32,000	—	—	900	608	20,000	18,000	—
9,508	—	—	621	82	6,688	6,412	—
132,000	—	—	81,000	3,176	83,000	77,400	—
2,242,968	—	—	97,496	11,193	539,732	418,043	47,254

‡ 44,000*l.* building; 9,000*l.* land.

On the Statistics *of* Crime *in* Birmingham, *as* Compared *with other* Large Towns. *By* J. Thackray Bunce, Esq.

[Read before Section F, British Association, at Birmingham, September, 1865.]

Taking all England as the standard, I have compared the crime of Birmingham with that of the whole country, and also with the crime of Manchester, Liverpool, Leeds, and Sheffield, selecting these, both as the largest towns in the kingdom, and also as having some points of resemblance to Birmingham in the facilities offered for the commission of crime. Throughout the following tables I have taken my figures from the volume of "Judicial "Statistics" issued by the Home Office, and have calculated the proportion of criminals and offences to population on the census returns of 1861. For the sake of brevity the state of crime in Birmingham is given only at three triennial periods—1858, 1861, and 1864. The results of the examination are given in seven tables appended to the paper.

Table I shows the number of houses of bad character reported to the police.

Table II shows the number of the criminal classes, in their recognised divisions of known thieves, receivers, prostitutes, suspected persons and vagrants, as estimated by the police.

Table III contains the number of indictable offences committed, with the number of persons apprehended, discharged, and committed for trial.

Table IV gives the numbers of persons proceeded against summarily, with those discharged, convicted, and fined.

Tables V, VI, and VII give the nature of the indictable offences committed, the principal offences under the class of summary procedure, and the previous character (as returned by the police) of the persons dealt with under both heads.

It will probably be sufficient to read a summary of the first four of these tables:—

	1864.	1861.	1858.
Total criminal class	3,190	3,271	6,415
,, houses of bad character	906	907	844
,, number indictable offences	752	836	2,659
,, ,, summary ,,	8,420	6,905	3,285
General total of indictable and summary offences	9,172	7,741	5,944
Total persons apprehended and summoned	9,018	7,578	4,329
,, number discharged	4,138	3,001	2,320
,, ,, convicted or committed for trial	4,880	4,553	2,009

The discrepancy between the criminal class in 1858 and 1864 is accounted for by the adoption of a better mode of reckoning them by the police: in the former year they were merely estimated, in the last-named year the name of every person belonging to the criminal class (that is, known to be living by crime or to be a professional vagrant) was actually written down, and care was taken to see that no name appeared twice in the list. The sudden decline in the number of indictable offences between 1858 and 1861 (from 2,659 to 752) is explained by those changes in the law which gave magistrates in petty sessions authority to deal with certain classes of offences previously sent to the quarter sessions for trial. The increase last year in the number of summary offences arose from the circumstance that assaults heard on summonses had not previously been included in the number of assaults. It is satisfactory to observe that the number of indictable offences—the real test of criminality—has steadily declined: in 1861 it was 836, on a population of 296,067; in 1864 it was 752, on an estimated population of nearly 318,000. The number of summary offences, on the other hand, has increased, owing in great measure to prosecutions for offences against bye-laws passed under Acts of Parliament obtained for the local government of the borough. The houses of bad character have slightly increased, and so also has the number of the criminal population. It may be stated here that in 1864 the criminal classes were composed as follows:—females under 16, 234; females above 16, 1,017; total females, 1,251. Males under 16, 296; males above 16, 1,643; total males, 1,939 = general total, 3,190. For the 752 indictable offences committed in that year, 466 males and 132 females (total 598) were apprehended; of whom 338 males and 93 females (total 431) were committed for trial. For summary offences in the same year, 6,784 males and 1,636 females (total 8,420) were proceeded against; and of these 4,449 were convicted, 2,684 of them being merely fined. Coming to the class of indictable offences, Birmingham is found to be remarkably free from the more serious kinds of crime. In 1864 there were 2 cases of murder, and 31 of attempted murder, manslaughter, and cutting and wounding. The cases of burglary, and breaking into shops and houses, were 289, a slight increase upon 1861 (269). The number of larcenies was 225 in 1864, and 223 in 1861. Of embezzlement there were 47 cases in 1864, and 49 in 1861. Forgery numbered only 5 cases in 1864; of coining and uttering false money (generally supposed to be a specialty of Birmingham) there were but 21 cases; and of rape and criminal assaults there were 11 cases, as against 14 in 1861, and 19 in 1858. Robbery and attempted robbery with violence, forms also a small and decreasing class—the cases being 54 in 1858, 27 in 1861, and 18 in 1864. In the class of summary offences, the principal items in 1864

were, common assaults, 1,918; drunk and disorderly, 1,373; offences by publicans, 459; offences against local acts, 1,695; larceny, 1,044; offences against the Vagrant Acts, 706; and fraudulent weights and measures, 278. The return of the character of the persons proceeded against shows that the 3,190 members of the criminal class must either be very much over estimated, or very inattentive to the prosecution of their imputed profession—for of the 752 indictable offences in 1864, 206 were committed by persons either of previous good character, or whose characters were unknown; and of the 8,400 summary offences, the reputed members of the criminal class are credited with only 2,207—or barely more than one-fourth. This disparity would, of course, be greatly lessened by taking into account the large number of offences against local acts, and against the Weights and Measures Act; but I am bound to express an opinion, founded upon careful study of the "Judicial Statistics," that the reported numbers of the criminal classes in all the large towns are mere approximations to the actual numbers, and are nearly, if not quite, valueless for the purposes of comparison.

From the above-mentioned figures, and those contained in the appended tables, I deduce the following conclusions—that, considering the population of Birmingham, and the peculiar temptations to which large classes of the population are exposed, the crime of the town is much less in amount, and of a decidedly less serious nature than could be expected; and further, that in regard to the graver indictable offences, crime is steadily diminishing. I now proceed to make a few notes of comparison between Birmingham and other large towns. The following tables show the general results of a comparison of all England, Birmingham, Manchester, Liverpool, Leeds, and Sheffield for the year 1864:—

Place.	Population, 1861.	Criminal Classes.	Disreputable Houses.	Indictable Offences.	Summary Offences.
England and Wales	20,066,224	101,303	—	51,058	440,913
Birmingham	296,076	3,190	906	752	8,420
Manchester	338,346	3,106	1,111	6,623	11,327
Liverpool	443,874	3,175	1,518	4,326	36,448
Leeds	207,000	1,588	313	489	6,201
Sheffield	185,000	433	161	414	5,091

Coming to the class of offences committed, the following table shows the comparative criminality of Birmingham and the four other towns above named:—

Indictable Offences.	Birmingham.	Manchester.	Liverpool.	Leeds.	Sheffield.
Murder	2	3	9	—	1
Attempts to murder, &c.	31	31	148	7	13
Burglary and housebreaking	289	502	305	67	34
Highway robbery	18	171	47	26	9
Larcenies	225	5,286	3,215	313	224

An examination of the principal items under the head of summary offences, yields the following comparative result :—

	Birmingham.	Manchester.	Liverpool.	Leeds.	Sheffield.
Assaults	1,918	2,357	3,461	1,816	981
Drunk and disorderly	1,373	3,587	14,002	1,815	1,038
Offences by publicans	459	855	933	91	224
,, against local acts	1,695	145	8,726	835	787
Malicious damage	199	246	637	164	181
Larceny	1,044	1,145	2,238	414	349
Offences against Vagrancy Act	706	1,127	1,236	342	516
Offences against Weights and Measures Act	278	138	118	6	298

The sea-faring and migratory population of Liverpool of course accounts for the excessive number of drunken cases in that town, and renders comparison unfair; and I am not sufficiently acquainted with the provisions of the local acts in the towns named, to institute a comparison on this head. Both these classes of offences must therefore be dismissed from consideration. But taking the indictable offences, and making due allowance for differences in population, it appears that in regard to burglary and housebreaking, Liverpool is a little, and Leeds and Sheffield are very much better than Birmingham; but that Manchester is very much worse. In regard to robbery from the person with violence, Birmingham is better than any of the towns named, excepting Sheffield. In regard to larcenies, all the towns named are much worse than Birmingham; Liverpool and Manchester being so in a most remarkable degree.

Taking the principal classes of summary offences (excluding the drunken cases in Liverpool), it appears that Birmingham is much less drunken than any of the above-named towns, that assaults in Birmingham are fewer than in any place but Sheffield, that in regard to larcenies it is superior to Liverpool, but slightly inferior to Manchester, and much below Leeds and Sheffield, and that in offences against the Vagrant Acts it is superior to all but Leeds.

I shall trouble the Section with only one more table, showing the number of the criminal classes, the indictable offences, the summary offences, and of both combined, in proportion to population :—

	England, 1 in	Birmingham, 1 in	Manchester, 1 in	Liverpool, 1 in	Leeds, 1 in	Sheffield, 1 in
Indictable Offences— Crimes reported.....	394·96	393·72	51·08	102·6	423·3	446·86
Summary Offences— Persons proceeded against.....	45·5	35·16	29·87	12·17	33·38	36·33
Indictable Offences and Summary Offences— Taken together	40·8	32·28	18·85	10·88	30·94	33·6
Criminal Classes— Reputed number	198·08	92·81	108·83	108·3	130·35	427·25

From this table it appears that in regard to the more serious classes of crime included under the head of indictable offences, Birmingham is but very slightly under the average of all England, the proportion of crimes committed being in round figures 1 in 395 to all England, and 1 in 394 in Birmingham. Leeds and Sheffield are above the average of the kingdom; Liverpool and Manchester enormously below it. The respective morality in regard to indictable offences of the five towns, therefore, stands as follows:—Sheffield, Leeds, Birmingham, Liverpool, and Manchester. In regard to offences over which the magistrates exercise summary jurisdiction, the places undergo some modification: the five towns standing as follow in the order of criminality — Sheffield, Birmingham, Leeds, Manchester, and Liverpool. Taking both classes of offences together —the same order is maintained, Sheffield still keeping the lead; a fact which will not a little surprise those who have been accustomed to consider that town as one of the worst in the kingdom—an evil reputation which it has unjustly shared with Birmingham. One more table I put in for the information of the Section, rather than as intending to offer any remarks upon it, though some of the results are suggestive, and even startling enough to give rise to comment and inquiry:—

Indictable Offences.—Crimes Reported, Apprehensions, and Number of Persons Discharged and Committed.

	Offences.	Apprehended.	Discharged.	Convicted.	Police to Population.
					1 in
Leeds	489	414	77	337	787
Sheffield	351	332	120	212	801
Birmingham	752	598	157	431	785
Liverpool	4,326	2,125	1,213	912	431
Manchester.....	6,623	1,407	775	632	504
All England	51,058	28,734	8,700	20,004	906

From this table it appears that the percentage of *apprehensions to reported offences* is as follows:—all England, $56\frac{1}{4}$; Birmingham, 79; Manchester, 21; Liverpool, 49; Leeds, $84\frac{3}{4}$; Sheffield, $94\frac{1}{2}$.

The *percentage of committals* to apprehensions is as follows:—all England, $69\frac{1}{2}$; Birmingham, 72; Manchester, 45; Liverpool, 42; Leeds, 81; Sheffield, $63\frac{3}{4}$.

Note.—Since this paper was read, the police returns for Birmingham, for the year ending 29th September, 1865, have been made up. They show a slight decrease in the number of the criminal classes, 3,068, as against 3,190 in the previous year; and there is also a decrease in the number of houses of bad character, 866 in 1865, as against 906 in 1864. But, strangely enough, there is a decided increase in the number of offences, both as regards indictable and summary offences. The statement for the two years is as follows:—

	Indictable Offences.	Summary Prosecutions.
1864.....	752	8,420
'65	1,258	9,188

The increase in the number of *indictable offences* reported is 506, due chiefly to an increased number of larcenies, of burglaries, or attempted burglaries. In 1864, the larcenies reported were 224; in 1865, they were 466; an increase of 232, or more than one-half. Of burglaries and attempted burglaries there were reported 289 in 1864, and 417 in 1865, an increase of 126, or nearly one-fourth. There was also an increase of 46 cases of coining and uttering. It may be the case that there has been a general increase of crime throughout the kingdom; but until the next volume of "Judicial "Statistics" is published, there exists no means of determining this point. I have been unable to ascertain that there are any special causes which would justify me in considering the increase in Birmingham as peculiar to that town. Still, the fact is so remarkable that I have thought it only proper to make it the subject of a note. The increase in the number of *persons summarily proceeded against*, 768, is accounted for under three heads; assaults, which showed an increase of 227 (2,145 as against 1,918); drunk and disorderly, increase 333 (1,706 as against 1,373); and malicious damage, increase 32 (231 as against 199). There was also a slight increase in the number of prosecutions of beer-house keepers. Another point worthy of note is that the proportions of apprehensions to offences reported fell off greatly in 1865, as compared with

the previous year. In 1864, the number of persons apprehended was 79½ per cent. on the indictable offences reported; and the number committed was 72 per cent. on the apprehensions. In 1865, the apprehensions were only 64 per cent. on the number of offences reported; and the committals 54 per cent. on the apprehensions. These results would seem to lead to the conclusion that while crime has increased, the police have proved themselves less *efficient* than usual (as shown by the smaller percentage of apprehensions upon offences), and less *judicious*, as shown by the still greater reduction in the percentage of committals upon apprehensions.

J. T. B.

APPENDIX.

The following tables give the state of crime in Birmingham:—

TABLE I.—*Houses of Bad Character.*

	Receivers.	Victuallers.	Beer Houses.	Coffee Shops.	Others.	Brothels.	Tramps.	Total.
1864....	128	193	129	9	18	183	246	906
'61....	212	128	82	17	30	204	234	907
'58....	201	84	32	20	43	224	240	844

TABLE II.—*Numbers of the Criminal Class in Birmingham.*

Year.	Known Thieves.		Receivers.	Prostitutes.	Suspects.		Daily Average Vagrants.	
	Males.	Females.			Males.	Females.	Males.	Females.
1864 ...	656	323	128	402	469	283	695	234
	979				752		929	

Year.	Totals under 16.		Totals above 16.		Grand Total.
	Males.	Females.	Males.	Females.	
1864.....	296	234	1,643	1,017	3,190
	929		530		

TABLE III.—*Indictable Offences.*

Year.	Crimes Committed.	Persons Apprehended.		Discharged.		Committed for Trial.		Total.
		Males.	Females.	Males.	Females.	Males.	Females.	
1864	752	466	132	128	39	338	93	431
'61	836	503	170	158	64	327	100	427
'58	2,659	753	291	439	208	314	83	397

TABLE IV.—*Summary Offences.*

Year.	Persons Proceeded Against.			Discharged.	Convicted.	Fined.
	Males.	Females.	Total.			
1864	6,784	1,636	8,420	3,971	4,449	2,684
'61	5,667	1,238	6,905	2,779	4,126	2,659
'58	2,590	695	3,285	1,673	1,612	758

TABLE V.—*Indictable Offences.*

Nature of Crime.	1864.	1861.	1858.
1. Murder	2	2	—
2. Attempts—wounding, manslaughter	31	21	25
3. Rape and assault with intent, unnatural offence, &c.	11	14	19
4. Bigamy	3	6	—
5. Assaults, &c., on police officers, &c.	2	15	11
6. Burglary, sacrilege, breaking into shops, and attempts at ditto	289	269	491
7. Highway robbery and attempts, &c.....	18	27	54
8. Cattle, horse, and sheep stealing	3	13	14
9. Larceny of all classes, and attempts to steal	224	223	1,728
10. Embezzlement.....	47	49	37
11. Post Office robberies	—	—	—
12. Receiving stolen goods	34	31	41
13. False pretences, &c.	31	66	101
14. Arson, &c.	1	1	2
15. Forgery	5	13	13
16. Coining and uttering	21	49	96
17. Perjury	4	9	—
18. Disorderly houses, &c.	1	1	—
19. Suicide—attempts	21	12	—
20. Other felonies and misdemeanors	3	4	7

TABLE VI.—*Nature of Summary Offences.*

	1864.	1861.	1858.
Assaults	1,918	702*	615
Drunk and disorderly	1,373	1,186	872
Offences by victuallers and beerhouse keepers	459	719	74
Against local acts	1,695	1,395	111
Malicious damages, &c.	199	116	116
Larceny, &c.	1,044	911	580
Vagrant Act	706	728	408
Weights and Measures Act	278	286	—

* A number on summonses not included.

TABLE VII.—*Class of Persons proceeded against.*

	1864.	1861.	1858.
Indictable Offences—			
Previous good character	101	90	104
Character not known	105	211	507
Known thieves	284	124	177
Prostitutes	4	33	113
Vagrants	—	43	4
Suspicious characters	94	159	116
Habitual drunkards	10	13	20
Summary Offences—			
*Previous good character	412	2,428	458
*Character unknown	5,857	2,632	1,689
Known thieves	554	323	118
Prostitutes	111	267	167
Vagrants	553	498	281
Suspicious characters	447	564	452
Habitual drunkards	542	194	120

* Offences against local acts, assaults on summons, offences against Weights and Measures Act, &c.

Statistics *of* Metropolitan *and* Provincial General Hospitals *for* 1863.

The returns for the year 1863, like those for 1862, are incomplete, no return having been received from University College Hospital, Middlesex Hospital, or the Great Northern. The other London general hospitals have forwarded returns, more or less complete. The number of country hospitals forwarding returns is not so large as in the year preceding, seven hospitals only having responded to the Society's circulars.

It is hoped that the returns for 1864, some of which are already in the hands of the Secretary, will be published early in the year 1866, and that those for 1865 will be received in time for publication before the close of that year.

Two additional tables have been added to the present report; the one for London presents the rate of mortality for the three years, 1861-63, the other, for the country, for the two years, 1862-63.

The figures contained in these tables will serve to show the fluctuations in the rate of mortality of the same hospital from year to year. Similar tables will appear in future reports.

In order to keep before the committees of management and medical officers of the several hospitals, in town and country, the origin of this series of reports, the resolutions passed at the meeting, held at Guy's Hospital, 21st June, 1861, are given below, slightly abbreviated.

1. That the metropolitan hospitals should adopt one uniform system of registration of patients.

2. That at every metropolitan hospital, there be kept one or more books, which shall comprise the following particulars relating to the patients:—the Age, Sex, Social Relation (Mar., Single, Wid.), Occupation, Name of Disease, or Injury, Date of Admission and Discharge, Result, Days in Hospital, and a column for remarks.

3. That those hospitals which have not yet adopted a system of registration embracing the above particulars, are recommended to employ a register book containing all the annexed particulars in printed columns:—

Number of Patient. | Date of Admission. | Name. | Residence (Street and Parish). | Medical Officer. | Ward. | Age. | Male. | Female. | Soc. Relat. (M. S. W.) | Occupation. | Name of Disease or Injury. | Date of Discharge. | Result. | Days in Hospital. | Remarks.

And that the first set of headings commencing with "Number," and terminating with "Ward," be printed on the left hand page, and that the remainder be placed on the right hand page of the Register; and also that each page of the register book be ruled to contain either 25, 50, or 100 horizontal lines, each line to give the particulars of an individual case.

4. That as far as practicable in the column of the register book headed Disease or Injury, the nomenclature employed by the Registrar-General be adopted, with the additions contained in the forms submitted by Miss Nightingale to the International Statistical Congress.

5. That the Council of the *Statistical Society* having kindly undertaken to publish in their *Journal* some of the leading statistics of the metropolitan hospitals, if provided annually with the necessary information, the authorities of the several metropolitan hospitals be requested, at the close of each year, to draw up and communicate to that Society a summary of the statistics of the hospital for the

METROPOLITAN

TABLE I.—*General Results.* (*No distinction*

Hospital.	*Remaining 1st January*, 1863.	Admitted during the Year.	Total.	Discharged Well or Convalescent.	Relieved.
	No.	No.	No.	No.	No.
St. Bartholomew's	481	5,461	5,942	4,449	—
Guy's	502	5,005	5,507	2,500	1,539
St. Thomas's	195	1,851	2,046	1,094	436
London	367	4,368	4,735	1,850	1,833
St. George's	291	3,784	4,075	1,246	2,104
Middlesex	—	—	—	—	—
St. Mary's	132	1,924	2,056	1,216	391
Westminster	165	1,827	1,992	1,662	—
King's College	129	1,447	1,576	787	345
University	—	—	—	—	—
Royal Free	83	1,257	1,340	674	459
Charing Cross	83	1,102	1,185	994	—
Metropolitan Free	8	159	167	83	50
Great Northern	—	—	—	—	—
Totals (*so far as returned*)	2,438	28,185	30,621	16,555	7,157

TABLE II.—*Medical and Surgical*

Hospital.	Medical Wards.					
	Remaining 1st January, 1863.	Admitted during the Year.	Total.	Discharged.	Died.	*Remaining 1st January*, 1864.
	No.	No.	No.	No.	No.	No.
St. Bartholomew's	187	2,105	2,292	1,752	322	218
Guy's	189	1,886	2,075	1,566	293	216
St. Thomas's	83	895	978	771	117	90
London	109	1,287	1,396	1,127	160	109
St. George's	112	1,689	1,801	1,485	200	116
Middlesex	—	—	—	—	—	—
St. Mary's	65	957	1,022	835	123	64
Westminster	—	—	—	—	—	—
King's College	66	843	909	780	129	91
University	—	—	—	—	—	—
Royal Free	21	302	323	264	38	21
Charing Cross	34	504	538	451	53	34
Metropolitan Free	1	82	83	67	10	6
Great Northern	—	—	—	—	—	—
Totals (*so far as returned*)	867	10,550	11,417	9,098	1,445	965

year; such summary to comprise the data tabulated in the manner represented on the accompanying form.

6. That it be suggested to the authorities of the several metropolitan hospitals, that it will be of great public advantage if they will also publish annually a full report of the statistics of disease treated within the hospital, following, as far as

HOSPITALS.

of Sex; nor of Medical or Surgical Cases.)

Unrelieved.	Discharged for Special Reasons.	Died.	*Remaining 1st January*, 1864.	Brought in Dead.	Hospital.
No.	No.	No.	No.	No.	
148	236	557	552	26	St. Bartholomew's
367	89	486	526	7	Guy's
36	88	191	201	4	St. Thomas's
34	252	381	385	20	London
30	105	315	275	4	St. George's
—	—	—	—	—	Middlesex
22	95	188	144	35	St. Mary's
—	11	166	153	4	Westminster
75	62	178	154	10	King's College
—	—	—	—	—	University
29	10	81	87	4	Royal Free
—	—	85	106	—	Charing Cross
—	6	17	11	—	Metropolitan Free
—	—	—	—	—	Great Northern
741	954	2,645	2,594	114	Totals (*so far as returned*)

Cases, without distinction of Sex.

Surgical Wards.						Hospital.
Remaining 1st January, 1863.	Admitted during the Year.	Total.	Discharged.	Died.	*Remaining 1st January*, 1864.	
No.	No.	No.	No.	No.	No.	
294	3,356	3,650	3,081	235	334	St. Bartholomew's
313	3,119	3,432	2,929	193	310	Guy's
112	956	1,068	883	74	111	St. Thomas's
258	3,081	3,339	2,842	221	276	London
179	2,095	2,274	2,000	115	159	St. George's
—	—	—	—	—	—	Middlesex
67	967	1,034	889	65	80	St. Mary's
—	—	—	—	—	—	Westminster
63	604	667	618	49	63	King's College
—	—	—	—	—	—	University
62	955	1,017	908	43	66	Royal Free
49	598	647	543	32	72	Charing Cross
6	78	84	72	7	5	Metropolitan Free
—	—	—	—	—	—	Great Northern
1,403	15,809	17,212	14,265	1,034	1,476	Totals (*so far as returned*)

practicable, the arrangement and nomenclature employed by the Registrar-General and by Miss Nightingale in the paper referred to in the third resolution.

7. That in the opinion of this meeting, it is essential that there should be in every hospital an officer charged specially with the duty of attending to the registration of patients.

Table III.—*Average Number of Patients and Mean Residence.*

Hospital.	All Cases.				Medical Cases.				Surgical Cases.			
	Average Number Resident.			Mean Residence.	Average Number Resident.			Mean Residence.	Average Number Resident.			Mean Residence.
	Males.	Females.	Total.		Males.	Females.	Total.		Males.	Females.	Total.	
	No.	No.	No.	Days.	No.	No.	No.	Days.	No.	No.	No.	Days.
St. Bartholomew's	—	—	541	33	98	108	206	32	179	156	335	34
Guy's	296	209	505	33	108	97	205	36	188	114	302	32
St. Thomas's	113	79	192	38	43	38	81	33	71	40	111	42
London	247	120	367	31	60	46	106	31	187	74	261	30
St. George's	162	132	294	27	58	61	119	25	104	71	175	29
Middlesex	—	—	—	—	—	—	—	—	—	—	—	—
St. Mary's	78	62	140	26	28	35	63	24	50	27	77	29
Westminster	—	—	—	—	—	—	—	—	—	—	—	—
King's College	—	—	—	—	—	—	—	—	—	—	—	—
University	—	—	—	—	—	—	—	—	—	—	—	—
Royal Free	32	43	75	23	8	10	18	22	24	33	57	24
Charing Cross	—	—	—	33	—	—	—	—	—	—	—	—
Metropolitan Free	5	7	12	27	2	4	6	22	3	3	6	32
Great Northern	—	—	—	—	—	—	—	—	—	—	—	—
Totals (*so far as returned*)	933	652	2,126	Average 30	405	399	804	Average 28	806	518	1,324	Avag 31

Table IV.—*Rate of Mortality.*

Hospital.	All Cases.			Medical Cases.			Surgical Cases.		
	Males.	Females.	Males and Females.	Males.	Females.	Males and Females.	Males.	Females.	Males and Females.
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
St. Bartholomew's	9·9	8·7	9·3	16·1	12·1	14·0	6·7	5·9	6·3
Guy's	10·8	8·7	9·7	18·7	12·3	15·5	6·8	5·0	5·9
St. Thomas's	10·5	10·1	10·3	14·4	12·2	13·2	7·2	8·7	7·9
London	9·1	8·0	8·6	15·4	8·4	11·10	6·9	7·8	7·2
St. George's	9·3	7·0	8·3	14·8	8·9	11·8	5·8	4·9	5·3
Middlesex	—	—	—	—	—	—	—	—	—
St. Mary's	9·2	6·5	7·9	14·9	7·9	11·4	4·8	4·5	4·6
Westminster	—	—	9·0	—	—	—	—	—	—
King's College	13·8	11·0	12·5	18·9	12·7	15·8	8·4	7·7	8·1
University	—	—	—	—	—	—	—	—	—
Royal Free	7·9	4·2	6·0	15·1	8·5	11·7	5·8	2·9	4·2
Charing Cross	9·2	6·2	7·8	14·1	7·4	10·5	6·2	4·4	5·5
Metropolitan Free	12·4	8·0	10·2	19·0	7·0	13·0	6·0	8·0	7·0
Great Northern	—	—	—	—	—	—	—	—	—
Average (*so far as returned*)	—	—	9·1	—	—	12·9	—	—	6·2

*** Table IV.—The death-rate in this and in the corresponding table of former reports is generally that stated in the returns; but when not so stated, it has been computed thus:

$$\frac{\text{Annual deaths}}{\text{Annual admissions} + \text{patients at the beginning} - \text{those at the end of the year.}}$$

TABLE V.—*Admissions and Deaths in General and Special Wards.*

Hospital.	General Wards. (Medical and Surgical.)			Special Wards.		General and Special Wards.		
	Admitted.	Died.	Rate of Mortality.	Admitted.	Died.	Admitted.	Died.	Rate of Mortality.
	No.	No.	Per cnt.	No.	No.	No.	No.	Per cnt.
St. Bartholomew's	5,197	544	10·47	745	13	5,942	557	9·37
Guy's	3,942	467	11·85	1,063	19	5,005	486	9·71
St. Thomas's	—	—	—	—	—	—	—	—
London	4,368	381	8·72	No account kept		4,368	381	8·72
St. George's	4,075	315	7·73	Nil	Nil	4,075	315	7·73
Middlesex	—	—	—	—	—	—	—	—
St. Mary's	1,789	183	10·23	135	5	1,924	188	9·77
Westminster	1,992	157	7·87	Nil	Nil	1,992	157	7·87
King's College	1,576	178	11·30	55	1	1,631	179	10·97
University	—	—	—	—	—	—	—	—
Royal Free	—	—	—	—	—	—	—	—
Charing Cross	1,185	85	7·15	Nil	Nil	1,185	85	7·15
Metropolitan Free	167	17	10·18	„	„	167	17	10·18
Great Northern	—	—	—	—	—	—	—	—
Totals (*so far as returned*)	24,291	2,327	Average 9·5	1,998	38	26,289	2,365	Average 9·5

ADDITIONAL TABLE.—*Rate of Mortality in the General Wards for the Years* 1861, 1862, *and* 1863.

Hospital.	1861.	1862.	1863.
St. Bartholomew's	12·3	12·5	11·7
Guy's	11·2	11·8	11·9
St. Thomas's	9·8	8·8	10·4
London*	8·4	7·7	8·8
St. George's	8·7	8·4	8·3
Middlesex	11·6	—	—
St. Mary's	10·9	10·0	10·3
Westminster	9·9	10·4	9·0
King's College	11·1	10·1	12·9
University	11·6	—	—
Royal Free	6·7	7·3	6·5
Charing Cross	8·4	8·6	7·9
Metropolitan Free	7·1	5·3	10·9
Great Northern	8·3	4·2	—
Average (*so far as returned*)	9·7	8·8	9·9

* No account of special wards.

ADDITIONAL TABLE.—See note to Table IV, *ante*.

COUNTY

TABLE (I).—*General Results.* (*No distinction*

Hospital.	*Remaining 1st January*, 1863.	Admitted during the Year.	Total.	Discharged Well or Convalescent.	Relieved.
	No.	No.	No.	No.	No.
York County	54	692	746	362	138
Devonshire (Buxton, Derbyshire)	18	856	874	779	—
Norfolk and Norwich	114	973	1,087	843	—
Taunton and Somerset	—	—	—	—	—
Stockport (infirmary)	14	213	227	170	6
Gloucester „	93	596	689	260	244
Royal Isle of Wight (infirmary)	—	—	—	—	—
West Sussex, East Hants, and Chichester (infirmary)	—	—	—	—	—
Hull General (infirmary)	—	—	—	—	—
Cheltenham	59	491	550	302	109
Leicester	143	1,358	1,501	—	—
Wolverhampton	—	—	—	—	—
Totals (*so far as returned*)	495	5,179	5,674	2,716	497

TABLE (II).—*Medical and Surgical*

Hospital.	Medical Wards.					
	Remaining 1st January, 1863.	Admitted during the Year.	Total.	Discharged.	Died.	*Remaining 1st January*, 1864.
	No.	No.	No.	No.	No.	No.
York County	—	—	—	—	—	—
Devonshire (Buxton, Derbyshire)	—	—	—	—	—	—
Norfolk and Norwich	50	388	438	368	29	41
Taunton and Somerset	—	—	—	—	—	—
Stockport (infirmary)	—	—	—	—	—	—
Gloucester „	26	190	216	177	10	29
Royal Isle of Wight (infirmary)	—	—	—	—	—	—
West Sussex, East Hants, and Chichester (infirmary)	—	—	—	—	—	—
Hull General (infirmary)	—	—	—	—	—	—
Cheltenham	18	186	204	163	5	36
Leicester	—	—	—	—	—	—
Wolverhampton	—	—	—	—	—	—
Totals (*so far as returned*)	94	764	858	708	44	106

HOSPITALS.

of Sex; nor of Medical or Surgical Cases.)

Unrelieved.	Discharged for Special Reasons.	Died.	*Remaining 1st January*, 1864.	Brought in Dead.	Hospital.
No.	No.	No.	No.	No.	
21	77	22	72	—	York County
76	4	2	13	—	Devonshire (Buxton, Derbyshire)
18	60	44	109	13	Norfolk and Norwich
—	—	—	—	—	Taunton and Somerset
—	—	22	14	—	Stockport (infirmary)
9	67	23	84	2	Gloucester ,,
—	—	—	—	—	Royal Isle of Wight (infirmary)
—	—	—	—	—	West Sussex, East Hants, and Chichester (infirmary)
—	—	—	—	—	Hull General (infirmary)
7	40	17	75	—	Cheltenham
—	—	—	—	—	Leicester
—	—	—	—	—	Wolverhampton
131	248	130	367	15	Totals

Cases, without distinction of Sex.

Surgical Wards.						Hospital.
Remaining 1st January, 1863.	Admitted during the Year.	Total.	Discharged.	Died.	*Remaining 1st January*, 1864.	
No.	No.	No.	No.	No.	No.	
—	—	—	—	—	—	York County
—	—	—	—	—	—	Devonshire (Buxton, Derbyshire)
64	585	649	553	28	68	Norfolk and Norwich
—	—	—	—	—	—	Taunton and Somerset
—	—	—	—	—	—	Stockport (infirmary)
67	406	473	405	13	55	Gloucester ,,
—	—	—	—	—	—	Royal Isle of Wight (infirmary)
—	—	—	—	—	—	West Sussex, East Hants, and Chichester (infirmary)
—	—	—	—	—	—	Hull General (infirmary)
41	305	346	295	12	39	Cheltenham
—	—	—	—	—	—	Leicester
—	—	—	—	—	—	Wolverhampton
172	1,296	1,468	1,253	53	162	Totals (*so far as returned*)

TABLE (III).—*Average Number of Patients and Mean Residence.*

Hospital.	All Cases.				Medical Cases.				Surgical Cases.			
	Average Number Resident.			Mean Residence.	Average Number Resident.			Mean Residence.	Average Number Resident.			Mean Residence.
	Males.	Females.	Total.		Males.	Females.	Total.		Males.	Females.	Total.	
	No.	No.	No.	Days.	No.	No.	No.	Days.	No.	No.	No.	Days.
York County	—	—	—	—	—	—	—	—	—	—	—	—
Devonshire (Buxton, Derbyshire)	—	—	59	25	—	—	—	—	—	—	—	—
Norfolk and Norwich	72	51	123	41	24	27	51	66	49	24	73	41
Taunton and Somerset	—	—	—	—	—	—	—	—	—	—	—	—
Stockport (infirmary)	—	—	—	—	—	—	—	—	—	—	—	—
Gloucester ,,	56	32	88	52	14	13	27	45	42	19	61	52
Royal Isle of Wight (infirmary)	—	—	—	—	—	—	—	—	—	—	—	—
West Sussex, East Hants, and Chichester (infirmary)	—	—	—	—	—	—	—	—	—	—	—	—
Hull General (infirmary)	—	—	—	—	—	—	—	—	—	—	—	—
Cheltenham	28	30	58	38	9	11	20	13	19	19	38	23
Leicester	—	—	—	—	—	—	—	—	—	—	—	—
Wolverhampton	—	—	—	—	—	—	—	—	—	—	—	—
Totals (*so far as returned*)	156	113	328	Average 39	47	51	98	Average 41	110	62	172	Average 39

TABLE (IV).—*Rate of Mortality.*

Hospital.	All Cases.			Medical Cases.			Surgical Cases.		
	Males.	Females.	Rate of Mortality.	Males.	Females.	Rate of Mortality.	Males.	Females.	Rate of Mortality.
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
York County	—	—	3·3	—	—	—	—	—	—
Devonshire (Buxton, Derbyshire)	0·4	·0	·2	—	—	—	—	—	—
Norfolk and Norwich	5·3	5·2	5·2	7·3	5·9	6·6	4·3	4·3	4·3
Taunton and Somerset	—	—	—	—	—	—	—	—	—
Stockport (infirmary)	—	—	10·3	—	—	—	—	—	—
Gloucester ,,	3·0	3·9	3·4	5·0	4·1	4·6	2·3	3·7	3·0
Royal Isle of Wight (infirmary)	—	—	—	—	—	—	—	—	—
West Sussex, East Hants, and Chichester (infirmary)	—	—	—	—	—	—	—	—	—
Hull General (infirmary)	—	—	—	—	—	—	—	—	—
Cheltenham	3·0	2·7	2·9	5·0	1·0	3·0	3·0	4·0	3·5
Leicester	—	—	—	—	—	—	—	—	—
Wolverhampton	—	—	—	—	—	—	—	—	—
Average (*so far as returned*)	—	—	4·2	—	—	4·7	—	—	3·6

*** TABLE (IV).—See note to Table IV, *ante*.

TABLE (V).—*Admissions and Deaths in General and Special Wards.*

Hospital.	General Wards. (Medical and Surgical.)			Special Wards.		General and Special Wards.		
	Admitted.	Died.	Rate of Mortality.	Admitted.	Died.	Admitted.	Died.	Rate of Mortality.
	No.	No.	Per cnt.	No.	No.	No.	No.	Per cnt.
k County	657	22	3·35	35	Nil	692	22	3·18
vonshire (Buxton, Derbyshire)	856	2	·23	Nil	,,	856	2	·23
folk and Norwich	973	44	4·52	,,	,,	973	44	4·52
nton and Somerset	—	—	—	—	—	—	—	—
ckport (infirmary)	227	22	9·69	Nil	Nil	227	22	9·69
oucester ,,	689	23	3·34	,,	,,	689	23	3·34
yal Isle of Wight (infirmary)	—	—	—	—	—	—	—	—
st Sussex, East Hants, nd Chichester (infirmary)	—	—	—	—	—	—	—	—
ll General (infirmary)	—	—	—	—	—	—	—	—
eltenham	—	—	—	—	—	—	—	—
cester	1,358	79	5·82	107	Nil	1,465	79	5·39
lverhampton	—	—	—	—	—	—	—	—
Totals (*so far as returned*)	4,760	192	Average 4·5	142	—	4,902	192	Average 4·4

ADDITIONAL TABLE.—*Rate of Mortality in the General Wards for the Years 1862 and 1863.*

Hospital.	1862.	1863.
York County	6·6	3·4
Devonshire (Buxton, Derbyshire)	·1	·2
Norfolk and Norwich	4·7	4·5
Taunton and Somerset	2·2	—
Stockport (infirmary)	8·3	10·3
Gloucester ,,	5·1	3·8
Royal Isle of Wight (infirmary)	5·3	—
West Sussex, East Hants, and Chichester (infirmary)	6·3	—
Hull General (infirmary)	7·1	—
Cheltenham	2·8	3·6
Leicester	6·2	—
Wolverhampton	9·3	—
Average (*so far as returned*)	5·3	4·3

*** The rates of mortality in this table have been calculated afresh from the data supplied by several hospitals. See note to Table IV, *ante*.

Note.—In all these tables the blanks (—) must be understood to imply an absence of information. The information comprised in Table V respecting special wards, was supplied by the several hospitals in answer to a circular letter sent by the honorary secretaries of the Statistical Society. The inquiry was suggested by the wide differences existing in the rates of mortality in hospitals having many circumstances in common.

BRITISH ASSOCIATION, 1865.

THIRTY-FIFTH *Meeting of the* BRITISH ASSOCIATION *for the Advancement of Science, held at* BIRMINGHAM, *6th — 13th September*, 1865.

Section F.—*Economic Science and Statistics.*

President.—THE RIGHT HON. LORD STANLEY, M.P., F.R.S.

Vice-Presidents.—The Right Hon. Sir John Pakington, M.P.; Sir John Bowring, F.R.S.; William Farr, M.D., D.C.L., F.R.S.; Professor Fawcett, M.P.; William Newmarch, F.R.S.; Professor Rogers (of Oxford); W. L. Sargant.

Secretaries.—Edmund Macrory, A.M.; J. D. Goodman; and G. J. Johnson.

Committee.—Thomas Avery; W. Roger Banks, M.D.; William Barlow; C. H. Bracebridge; Mr. Samuel Brown; J. T. Bunce; William Camps, M.D.; J. T. Danson; F. P. Fellowes; Alfred Hill; Edwin Hill; Lord Houghton; Hon. Joseph Howe (*Nova Scotia*); Sir Willoughby Jones; William Kenrick; Baron Kübeck (*Austria*); Professor Leone Levi; James McClelland; T. De Meschin, LL.D.; Dr. Orpen; Charles Ratcliff; A. Ryland; Samuel Timmins; Edward Vivian, M.A.; Robert Wilkinson; James Yates.

The following Papers occupied the attention of the Section:—

Thursday, 7th September, 1865.

The President's Opening Address.

Thomas Avery.—On the Municipal Expenditure of the Borough of Birmingham.

W. L. Sargant.—On the Vital Statistics of Birmingham.

Reports on Local Industries (First Group):

George Heaton.—Die Sinking.

J. P. Turner.—Button Manufacture.

W. Bridges Adams.—On the Division of Labour.

Friday, 8th September, 1865.

Reports on Local Industries (Second Group):

J. S. Wright.—Jewellery and Gilt Toys.

Dr. Lloyd.—Flint Glass.

Professor Leone Levi.—Statistical Data in Relation to the Representation of the People.

G. J. Johnson.—Statistics of the Benefit Building and Freehold Land Societies of Birmingham.

Saturday, 9th September, 1865.

The Section did not meet to-day.

Monday, 11*th September*, 1865.

David Morris.—On the Past and Present Productive Power of Cotton Machinery.

Mr. Edward Vivian, M.A.—On the Admission of Illegitimate Children into Workhouses, as a means of preventing Infanticide.

Professor J. E. T. Rogers.—On Patents and Copyright.

Tuesday, 12*th September*, 1865.

Report of the Committee appointed to consider the Question of Uniformity of Weights and Measures.

F. P. Fellowes.—On the Practical Advantages of the Metric System of Weights and Measures.

James Yates.—On Mural Standards for Exhibiting the Measures of Lengths legalized in the United Kingdom.

Alfred Hill.—Statistics of the Post Office Savings Bank.

T. de Meschin, LL.D.—On the proposed Extension of Government Administration to Railways.

J. Thackray Bunce.—Statistics of Crime in Birmingham, as compared with other Large Towns.

Reports on Local Industries:—Papier Mâché; Steel Wire; Steel Pens; Crown and Sheet Glass; Brassfounding; Lighthouse Lamps and Reflectors; Iron Manufacture of Staffordshire Stained Glass.

Wednesday, 13*th September*, 1865.

J. D. Goodman.—Statistics of the Small Arms Manufacture of Birmingham.

Rev. J. W. Bain.—The Social, Moral, and Educational Status of the Population of South Staffordshire.

Professor Bennett.—Statistics of Pneumonia.

G. B. Galloway.—Suggested Improvements applicable to the City of London and other Large Towns, to Improve Health and preserve Life.

G. B. Galloway.—Means of Saving Life from Buildings which may be on Fire.

G. B. Galloway.—Inter-communication between Railway Passengers.

J. T. Arlidge, M.B.—On the Duration of Life, the Prevailing Diseases, and the Causes of Death, of Potters.

Robert Wilkinson.—A Statistical Review of the Police-recognised Drunkenness of the Metropolis.

Henry C. Roper.—The Physical and Geographical Features of the Country Ten Miles round Dudley, with Remarks upon the Natural Drainage Area as they bear upon the Sanitary Condition of the District.

PROCEEDINGS OF THE STATISTICAL SOCIETY.

Session 1864-65.

First Ordinary Meeting, Tuesday, 15th November, 1864.

Colonel W. H. Sykes, M.P., F.R.S., President, in the Chair.

The following Candidates were elected Fellows of the Society, viz.:—

G. P. Ivey, Esq. | Professor W. S. Jevons, M.A.

The following Paper was read:—

"On the Commercial Progress of the Colonies, 1858-63." By E. T. Blakely, Esq.

Second Ordinary Meeting, Tuesday, 20th December, 1864.

Colonel W. H. Sykes, M.P., F.R.S., President, in the Chair.

The following Candidates were elected Fellows of the Society, viz.:—

F. P. Fellowes, Esq.	J. T. Minett, Esq.
H. Sutton, Esq.	E. T. Blakely, Esq.
P. Hill, Esq.	Lieut.-Colonel J. P. Kennedy.
G. Senior, Esq.	H. Y. Thomson, Esq.
W. H. Davis, Esq.	T. Hudson, Esq.

E. A. Hadley, Esq.

The following Paper was read:—

"On the Extension of Modern Subjects as a part of Regular "Study in Educational Institutions." By James Heywood, Esq., M.A., F.R.S.

Third Ordinary Meeting, Tuesday, 17th January, 1865.

William Newmarch, Esq., F.R.S., Vice-President, in the Chair.

The following Candidates were elected Fellows of the Society, viz.:—

Sir S. M. Peto, Bart., M.P.	Alderman S. J. Gibbons.
T. Y. Strachan, Esq.	T. G. Balfour, Esq., M.D.

J. J. Andrews, Esq.

The following Paper was read:—

"On the Census of 1861." By W. L. Sargant, Esq.

Fourth Ordinary Meeting, Tuesday, 21st February, 1865.

William Newmarch, Esq., F.R.S., Vice-President, in the Chair.

The following Candidates were elected Fellows of the Society, viz.:—

Monsieur A. Ansas. | J. Thackray Bunce, Esq.

The following Papers were read:—

"On Infant Mortality, and on Alleged Inaccuracies in the "Census." By William Farr, Esq., M.D., D.C.L., F.R.S.

"On the Prevalence of Phthisis in America, especially among "Females." By E. Y. Robins, Esq.

Fifth Ordinary Meeting, Tuesday, 21st March, 1865.

The Right Hon. Lord Houghton, President, in the Chair.

The following Candidate was elected a Fellow of the Society, viz.:—

W. S. Fitzwilliam, Esq.

The following Papers were read:—

"On the Statistical and Fiscal Definition of the word Income." By Professor J. E. T. Rogers.

"On Public Schools, and the Civil Service of India." By Horace Mann, Esq.

Sixth Ordinary Meeting, Tuesday, 18th April, 1865.

Samuel Brown, Esq., Vice-President, in the Chair.

The following Candidates were elected Fellows of the Society, viz.:—

G. S. Horsnail, Esq. | J. B. Bannerman, Esq.
A. Webster, Esq. | E. Waterhouse, Esq., B.A.
Jacob Waley, Esq., M.A.

The following Paper was read:—

"On the Supposed Decrease of the Turks, and Increase of the "Christians in Turkey." By Hyde Clarke, Esq.

Seventh Ordinary Meeting, Tuesday, 16th May, 1865.

Colonel W. H. Sykes, M.P., F.R.S., Vice-President, in the Chair.

The following Candidates were elected Fellows of the Society, viz.:—

H. G. Grist, Esq. | F. Martin, Esq.

The following Paper was read:—

"On the Variation of Prices, and the Value of the Currency "since 1782." By Professor W. S. Jevous, M.A.

Eighth Ordinary Meeting, Tuesday, 20th June, 1865.

Colonel W. H. Sykes, M.P., F.R.S., Vice-President, in the Chair.

The following Papers were read:—

"On the Economic Condition of the Highlands and Islands of "Scotland." By Professor Leone Levi.

"On the Country Clearing." By Sir John Lubbock, Bart.

MISCELLANEA.

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I.—*Telegraphic Reform.*

Some very sound observations were recently made upon this subject in a leading article of the *Manchester Guardian*, which is here reprinted. Efficient reform of the telegraphic system of this country, can only be looked for when the press shall generally lend its aid to the discussion of this important question :—

"Although the Edinburgh Chamber of Commerce has been the first to speak out on the subject of telegraphic communication, the opinion which it has expressed is by no means confined to that locality. During the last two or three years a strong feeling of dissatisfaction with the manner in which the telegraph companies discharge their functions has been spreading throughout the country. Their charges are too high, and the transmission of messages is subject to undue uncertainty and delay. There is really no reason why a telegram should not go to its destination within a specified time as surely and unfailingly as a letter goes through the post. The value of time in mercantile affairs is so great, the saving of even a few minutes will so often secure a great gain or avert a serious loss, that in certain transactions the telegraph would completely supersede the post as the regular medium of correspondence, if the companies encouraged it by punctuality and a moderate tariff. We are ready to give the companies credit for what they have done. Their service has undoubtedly been somewhat improved. The gross blunders which used at one time to be so common in the deciphering of messages, and the excessive delays which used to occur in their delivery, have become comparatively rare. We do not doubt that the companies are sincerely anxious to accommodate the public. That they fail to do so satisfactorily is due to the false principles on which they conduct their operations, and it is as much in their interest as in that of the public, that we now call attention to the subject. If they would deal more liberally with the public, they would certainly not lose by it.

"The grievances of the public are summed up very forcibly in the able report by Mr. George Harrison, which has been adopted unanimously by the Edinburgh Chamber of Commerce, and circulated among all the other chambers in the kingdom, with a view to a general agitation on the subject. The first head of complaint is the high tariff. The business is, as our readers know, in the hands of three companies. As long as they were separate, competition helped to keep down their charges; but they are now leagued together in an absolute monopoly. There was first a combination between the Electric and International and the Magnetic. Then the United Kingdom, which had been started on the principle of a uniform rate of

1*s.* for twenty words, was drawn into the combination, and prices were at once raised. The present tariff is 1*s.* per twenty words for distances of 100 miles and under; 1*s.* 6*d.* from 100 to 200 miles; and 2*s.* if above 200 miles; the charges for telegrams to and from Ireland are on a higher scale.

"Nobody, of course, expects the companies to do business on philanthropic principles. They are traders, seeking as large a profit as possible. It is the rule of parliament, however, in giving its sanction to undertakings of this nature, which in a greater or less degree over-ride private rights and are invested with a valuable monopoly, to impose certain restrictions in the interest of the public. There are limits which the companies must not surpass in their appetite for dividends. It is said that a fair trial was given to the low tariff introduced by the United Kingdom Company, and that it proved to be unremunerative. Our own opinion is, that the experiment was of too short duration to be conclusive, and that besides, even as it was, it by no means showed that the low rate was ruinous. It may be that the United Kingdom did not find it answer, but then the United Kingdom was subjected to sharp competition by the two old companies, who, by immediately lowering their charges to the same level, managed to retain the lion's share of the business. What might be a losing game for a new and only half organised company, under these trying circumstances, might be very profitable if adopted on a large scale by the three companies working as one. However that may be, we should like to see the matter investigated by a Parliamentary Committee. The testimony of the companies is doubtless quite honest, but it can hardly be deemed impartial or decisive. Judging from analogy, one cannot but believe that they are acting on a radically false principle. Small profits and quick returns is now the general rule of trade. The old slow-coach system of securing heavy returns out of a limited number of transactions is quite exploded in most branches of business; and the telegraph companies are undoubtedly making a sad mistake for themselves in thus obstinately adhering to it. It is an additional reason for parliamentary interference that not only does the public need to be protected against the companies, but that the companies apparently need to be protected against themselves. Even if it be made out that the charges cannot be diminished — and we are anxious that the question should be fairly examined on each side—the public is entitled to claim greater facilities from the companies. The three companies do not provide means of communication between more than about a thousand separate places, and the stations in many districts are few and far between. Compare this with the accommodation afforded by the General Post-office, which has 544 head offices, and 7,250 sub-offices, in England; 114 head offices. and 1,180 sub-offices, in Scotland; and 138 head offices, and 1,459 sub-offices, in Ireland; making altogether 10,685. We admit that the analogy between the Post-office and the telegraph is not complete. At the lowest price, telegrams will always cost so much as to deter large numbers from using them; and the class of people to whom such a swift medium of correspondence is necessary is small, compared with the infinite legion of letter writers. Again, each telegram must be dispatched by itself at an expense to the company which would not be incurred if it were not sent. But it makes no appreciable difference in the charges of the Post-office whether one letter or many thousand letters go from Manchester to London by any particular mail. At the same time there can be no doubt that telegraphic business is capable of being largely developed by proper encouragement in the same way as the business of the Post-office. Mr. Harrison gives some instructive figures in his report. The Americans make much greater use of the telegraph than we do, and this is not because they appreciate the value of time more, but because they have greater facilities for sending messages. In order to get trustworthy statistics we must go back before the war, for the subsequent returns are confused and incomplete. In 1859 five million messages were sent, at an average cost of 1*s.* 8*d.* each, producing a return, exclusive of the receipts from newspapers, of 400,000*l.*; whilst in Great Britain, in the same year, only 1,575,437 telegrams were sent, at an average cost of about 3*s.* 6*d.* each, the gross receipts being 275,704*l.* Comparing the population of the two countries, America sent more than three times the number

of telegrams that we sent. France, Belgium, and Switzerland, too, are all ahead of us on this point. It cannot be supposed that a greater demand for telegraphic communication exists in any of those states than in England. But in France, since 1862, there has been a uniform tariff of 1 fr. a message from one part of any department to another part, and of 2 frs. a message from a place in one department to a place in another. In Switzerland there is also a uniform charge of a franc; while in Belgium the rate is 1*s.* 3*d.* We should like to see a uniform rate in this country of say 6*d.* per message of twenty words when its journey did not go beyond a county, and of 1*s.* from one county to another. Considering the population, enterprise, and wealth of the kingdom, we cannot doubt that it would pay, and pay well. But, in order to give it a fair chance, additional stations would have to be opened and more wires laid down. Wherever any delay occurs in the transmission of a message, the invariable excuse is that the wires are over-crowded. The obvious answer is, let more wires be laid down, not only between places hitherto unconnected, but between places where, though there are already wires, more are wanted to do justice to the amount of business.

"The Edinburgh Chamber of Commerce do not recommend any specific plan by which the present system of telegraphic communication can be improved; but suggest three important reforms. The first is the amalgamation of the three existing companies, with a moderate tariff, to be further reduced as the profits grow beyond a certain limit, but this could be effected only by the consent of the parties. The second project is more feasible. It is to adopt a complete system of free trade, by passing a general act authorising any person or association of persons to erect telegraph posts along any public way throughout the United Kingdom. We would suggest that a clause should be added compelling the railway companies to give the use of their lines to all that applied for them for telegraphic purposes, on payment of the same amount of rent as they might be receiving from any other company. The Edinburgh people seem to have a leaning towards the purchase of the wires by the Government, which we certainly do not share. There is already on the statute book, an act authorising the State to acquire the railways, and the objections to such a measure have been repeatedly pointed out. There is less to be said against the transfer of the telegraphs to the State, for the capital involved is comparatively small—somewhere under 2,500,000*l.*—and the influence thereby conferred on the Government would not be so dangerous. We have no objection to see the question fully argued out; but our feeling is decidedly against imposing on the State any duty which can reasonably be left to private enterprise. The Post-office has been a remarkable success, but it by no means follows that Government telegraphs would be equally successful; and it must be remembered that St. Martin's-le-Grand is rather an exception, in point of efficiency and enterprise, to the general rule of imperial administration."

II.—*The Bank "Minimum" and the Money Market.*

The following article is taken from the *Globe* of the 11th October last:—

"The return from the Bank of England for the week ending this day (Wednesday) will be examined with much interest. The rise in the rate of discount from 4 to 7 per cent., during the last fortnight, began so unexpectedly, and proceeded so rapidly, that the weekly returns have been left in the lurch. The bank directors have been acting upon information, derived from accounts concerning which the public possess very little knowledge. We know that on Wednesday last the ratio between reserve and liabilities was much too small; we know also that the rise of the rate from 5 to 6 per cent. on Thursday last was not enough to restore equilibrium, for on Saturday 7 per cent. was deemed necessary.

But whether 7 per cent. has been bringing up the reserve to the mark, and quelling the demand for short loans, which had become excessive, we can only guess. If, as was assumed by the projectors of the Bank Act, it is desirable that an abstract of the bank books should be published once a week, so that all the world may know what is being done by the great fountain of issue in England, and why it is being done, then the idea suggests itself that, during the progress of such rapid changes in the price of short loans as we have been lately witnessing, it might be expedient to make these publications somewhat oftener. Unless there is mismanagement going on, we cannot suppose that the bank would be ashamed of any degree of publicity; and again, unless there is mismanagement going on, publicity for the truth is the best safeguard against panic. Why should not the Bank make a return whenever the rate of discount is raised? Surely it would not be derogatory to the dignity of the establishment to present the simplest of explanations for conduct, often, indeed, necessary, but at the same time not altogether usual. It happens that, at present, the direction having the confidence of the country, can do almost what it pleases without needing to render any apology; when the rate is altered, suddenly or not suddenly, it is taken for granted that the Bank is acting rightly. Confidence like this we believe to be most advantageous for all parties; but it is none the better for being blind, even for only two days together.

"No doubt this week's account will show that the movement of last Saturday up to 7 per cent. was fully justified by the state of affairs. We feel sure of this, not only because we trust the wisdom of the directors, not only because the Bank, when it does err, almost always errs rather on the side of leniency and tardiness, than of severity and haste, but also because this rise in the price of loans, suddenly as it came upon us, is by no means unaccountable. Partly it is attributable to speculations in cotton. Cotton in Liverpool is sold for cash; buyers fall back upon the local banks; and the local banks, having as usual no adequate reserves wherewith to meet a quick and great demand, fall back upon the Bank of England. The real reserves of all the provincial banks are in the reserve of the Bank of England, and consequently a drain at Liverpool very soon makes itself felt in London. We do not say that this is as it should be; we only say that it is so, and we may add, that to make the country banks (and the London banks too) hold their own reserves might be a rather difficult piece of legislation, but would certainly have some good effects. The rise in the price of loans, then, is partly due to transactions in cotton. It is also partly due to a steady, although slow, drain of bullion towards Egypt, Spain, and Brazil. This may be a small matter at present, but the time must be coming for much heavier exportations, and especially for the usual transmittances of silver to the East. Fortunately the foreign exchanges have ruled favourably for London during this present crisis, otherwise it might have been a rather serious affair. But we are yet far from secure against an adverse turn. Already the Bank of France is raising its rates, only a little less briskly than the Bank of England. Such are some of the obvious causes of 7 per cent. at the beginning of October, 1865; but the real root of it is to be sought deeper down.

"There is no doubt that, in 1863, 1864, and, to a less extent perhaps, in 1865, this country exceeded its means, over-invested, or rather entangled too large an amount of capital in inchoate enterprises out of its reach. The calls on those investments are now pressing on the speculators, many of whom, unable to borrow except on high class securities must sell—'sacrifice or perish.' As if the naturally speculative spirit of man was not of itself enough, it has been in various ways stimulated artificially. The safety-valve of limited responsibility, only completed for all branches of trade as lately as 1862, has deadened the sense of personal honour as to bearing losses, until, not only is there no kind of restraint upon castle building, sometimes on the ground, sometimes in the air, but direct encouragement is given to that disposition through companies formed for the making and discounting of bills, through financial and credit companies, promotion companies, and the rest. The machinery for the distribution of wealth has outrun the machinery for the production of wealth. It has become impossible for the supply of capital, created by the slow process of regular industry, to keep pace with the extravagance of

modern enterprise and private expenditure. True, the savings of Great Britain are enormous. They were calculated, twenty years ago, by Mr. Porter, at sixty millions sterling; they are now at least twice as much; the expenditure on railways (to say nothing of Government expenditure and other noticeable outlays) seems to sanction the opinion that the capital of Great Britain increases by a hundred and fifty or two hundred millions. But it is a mistake to suppose that all this capital, because saved, is as disposable as if it were so much money. The increase of population, for example, raises the rental of houses and the value of fields and landed estates; but these are not exportable commodities. They do not operate in enabling us to pay for imported luxuries, to lend to the Turks, the Egyptians, the Moors, the Brazilians, and all the rest of the world, without producing a disturbance of the foreign exchanges; neither do they operate in enabling us to pay for shares in engineering companies, or contract corporations. This time the scarcity of capital touches one set of investors; next time, may be within a week or a fortnight, it may touch another set, directly. Indirectly every scarcity affects all; the level is very soon found."

III.—*The Rate of Discount and the Currency.*

From the city article of the *Times*, 12th October :—

"One result of any sudden increase in the rate of discount in this country is still to show that there are among us a considerable number of traders and merchants who unite great practical skill in the conduct of their personal business, with a total ignorance of even the rudimentary principles of finance. Several correspondents take the present opportunity to protest against the 'serious injury inflicted upon trade,' and to point out the demonstration they assume it to afford of 'the necessity for an increase in the supplies of the converting medium.' They omit, however, to state what they mean by these phrases. The holders of capital constitute a section of the trading classes quite as important as the non-holders, and the former will dispute the doctrine of any serious injury being inflicted by a movement which gives them 7 per cent. instead of 4. Moreover, what can be the character of the trade that is seriously injured by such a rate? If the rise be but temporary—that is to say, supposing it to be maintained for about a month—it will make a difference of just $\frac{1}{4}$ per cent. in the cost of whatever borrowed funds our manufacturers may find necessary. If it be permanent, we then have proof that the profits of business are so large that people feel no hesitation in carrying it on or even extending it on those terms. Next, with regard to the necessity for an increase in the supplies of the converting medium, the question to be asked is, How is the increase to be obtained? There is not an individual in the country to whom an increase would be disagreeable, but there is no one who has yet discovered any way of attaining the object other than that of creating by his labour some article for which some other person will voluntarily give it to him in exchange. If England will produce more goods than she will consume, she will find that precisely to that extent she will be supplied by foreigners with this medium. If at any time she feel a scarcity of it, either for her internal wants or any other purpose, she has but to raise the price she is prepared to offer for it, and she will get almost instantaneously as much as she requires. We have just shown that we are willing to pay even 7 per cent. for an extra supply, and if that rate should fail to bring in all we desire the inference must simply be that the profits of trade in other parts of the world are also such as to render money at 7 per cent. a bargain, and that if we want to obtain a portion of our neighbours' share we must make a still higher bidding. The parties who now feel annoyed that they cannot get capital on their own terms had better make up their minds at once that this is the only method. The present amount of the 'converting medium' of the country is precisely

regulated by the commercial community themselves. The demand in proportion to the supply has sent the rate of discount up to 7 per cent. At that rate probably many merchants or financiers will delay or countermand orders they might be disposed to give for foreign bonds or foreign produce. But if in this state of things an additional supply of the converting medium could be fabricated by some hitherto unknown process, or could be drawn from the skies, the consequences would be that the rate of discount would drop, the orders for securities or goods would be sent out, the extra supply of the medium just obtained would be sent away in payment, the rate would then again be up at 7 per cent., and a further extra supply would become essential—the process, in fact, being one that must be repeated for ever. It is not surprising that those among the public who have not worked the matter out should, when they are told that this endless stream of unearned money is all that is wanted, and that the only bar to it is the Currency Act of 1844, think it a pity that the Government remain passive. But the Government, in deference to the craving, have already instituted inquiry after inquiry, and the uniform results of this search after the philosopher's stone may be found in an accumulation of ponderous blue books printed at the public cost, which contain the views of all who wished to be heard, and thoroughly exhaust every aspect of the question."

IV.—*The French Ironmasters and the Treaty of Commerce.*

Extracted from the letter of the *Economist's* correspondent at Paris (29th September):—

"Among the most violent adversaries of the treaty of commerce with England were the ironmasters; and to this day they denounce it with great bitterness. Yet (as stated in my last) the commission for fixing the value of goods imported and exported, declares that in 1864 the production was so large that prices actually declined, in spite of a diminution of imports and an increase of exports. They had predicted that the treaty would make them blow out all their furnaces! Their situation at the present moment seems even better than it was last year, for I find in a report on the iron market, that in the north of France they are maintaining an advance in prices obtained sometime back; that in the district of the Moselle they have proclaimed an advance of 10 fr. the ton until further orders; that in the district of St. Dizier business is satisfactory; that the same is the case at Paris; that in the east and in the neighbourhood of Lyons, a rise of 10 fr. has been declared; that in the south certain sorts of iron are much demanded; and that in the west 'foreign competition is somewhat paralysed.' The Customs returns, too, show how wrong the ironmasters were in dreading the foreigners. The duties received on the import of bar iron and rails having fallen from 3,155,000 fr. in the first seven months of 1862, to 9,000 fr. in the same period of 1865; and those in cast iron from 3,027,000 fr. to 896,000 fr. It is true that the duties on some descriptions of iron were reduced on the 1st of October, 1864, but that does not account for the enormous difference. It is owing exclusively to a decline in the *quantities* brought in. Of bar iron and rails, for example, the import in the first seven months of 1862 exceeded 45,000 tons; in the same period of this year it was only 715; cast iron fell from 123,000 tons to 46,000; and in all other sorts of iron the decline was equally considerable."

V.—*Income of Trades and Professions.*

The large increase which has recently taken place in the number of persons subjected to the income tax under Schedule D, is shown by the following comparison, taken from the columns of the *Times*:—

"In the financial year 1857-58 (the year ending 5th of April, 1858), 267,014 persons were charged income tax in Great Britain under Schedule D, the incomes thus charged with the tax amounting together to 80,214,119*l*. In the year 1863-64 308,416 persons were charged on incomes amounting to 95,844,222*l*. The following table shows the progress of this branch of taxation in these the last six years for which the returns have been issued, giving the number of persons charged to income tax under Schedule D at various rates of income, and the amount of the incomes of each class:—

Classes.	Year ended the 5th of April, 1858.		Year ended the 5th of April, 1864.	
	Amount of Income Charged with Tax.	Number of Persons in each Class.	Amount of Income Charged with Tax.	Number of Persons in each Class.
	£		£	
Under £100 a-year	1,303,562	20,977	2,502,342	56,682
£100 and under £150 ...	12,343,795	124,717	13,766,685	153,120
150 „ 200 ...	6,463,694	41,031		
200 „ 300	7,517,461	33,611	9,204,866	41,592
300 „ 400	4,956,455	15,524	5,800,397	18,278
400 „ 500	3,157,801	7,528	3,893,064	9,313
500 „ 600	2,928,972	5,660	3,648,578	7,097
600 „ 700	2,058,417	3,328	2,489,836	4,026
700 „ 800	1,522,156	2,101	1,864,909	2,549
800 „ 900	1,488,203	1,818	1,846,656	2,231
900 „ 1,000	786,888	845	876,701	944
1,000 „ 2,000 ...	7,146,607	5,539	8,734,108	6,862
2,000 „ 3,000	3,781,882	1,653	4,853,855	2,103
3,000 „ 4,000 ...	2,647,275	802	3,627,017	1,100
4,000 „ 5,000 ...	2,042,035	472	2,413,357	557
5,000 „ 10,000	5,754,885	862	7,565,070	1,140
10,000 „ 50,000	9,277,603	495	14,065,019	731
50,000 and upwards.....	5,036,428	51	8,744,762	91
Total for Great Britain	80,214,119	267,014	95,844,222	308,416

VI.—*Students' Attendances at the University of Aberdeen*, 1860-65.

Mr. Valentine has recently added to the local statistics* which he annually compiles for the *Aberdeen Journal*, the number of scholars attend-

* See vol. xxvii, pp. 357 *et seq. Statistical Journal.*

ing the different faculties at Aberdeen, and other particulars relating to the University, namely :—

	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.
1. *Attendance*—					
Arts	413	393	375	353	331
Medicine	146*	166	160	149	136
Law	18	12	6	10	6
Divinity	81	69	69	54	51†
	658	640	610	566	524
Deduct students attending two faculties	5	14	9	6	4
	653	626	601	560	520

	1861.	1862.	1863.	1864.
1*a*. *Summer Sessions*—				
Medicine	137	106	83	98
Law	16	9	6	11
	153	115	89	109
2. *Graduates*—				
Arts	61‡	52	41	42
Medicine	39	29	34	52
Divinity	—	—	—	4
	100	81	75	98
3. *Members of General Council*	813	443	359	452

* In medicine private students are included throughout.
† Up to 28th January, others ("partial") may yet enter.
‡ King's College, 34; Marischal, 27.

VII.—*The Judicial Statistics of the Home Office.*

The following criticism has been taken from the *Saturday Review* :—

"A volume lately published of *Judicial Statistics* furnishes some interesting information as to the numbers and distribution of what are called the criminal classes. It appears that, previously to 1861, all persons known to have been at any time convicted, were reckoned by the police as belonging to these classes; but now such persons, if known to have been living honestly for a year, are excluded. This is only one of many examples of the careless compilation of statistics which are afterwards studied with perhaps unnecessary diligence. It is stated that the police have lately been instructed that in making their returns they are not to proceed upon the principle that a person who has been once a thief is a thief always; and

we are promised in future years 'a more just estimate of the actual numbers of habitual thieves and depredators.'

"If it is difficult to define accurately a thief, it must be much more difficult to compile trustworthy returns of the numbers of 'prostitutes' and 'suspected persons.' The volume of *Judicial Statistics* does not inform us, and we will not presume to offer an opinion, what it is of which the latter classes are suspected. Is it of theft, or of prostitution, or are they 'suspected of being suspect?' It will occur to any lawyer, although it does not seem to have occurred to the compilers of these returns, that theft is a legal crime, but prostitution is not; and if statistics are intended for any other purpose than to amuse a Social Science Congress, they ought to be compiled with some regard to the actual condition of society. Perhaps, however, we are not quite accurate in saying that prostitution is not a legal crime; for, according to law as administered at the Middlesex Sessions, if a prostitute lives alone in lodgings she is safe, but if two prostitutes occupy a house together, that house may be indicted as disorderly. The information that in these classes of prostitutes and suspected persons there is a decrease for 1864 as compared with previous years, might be received with pleasure if it were possible to place any reliance upon the accuracy of the returns. But when it is stated that 'in the number of prostitutes a decrease appears of 706 as compared with the number in 1863,' people who live in any great town and have their eyes about them, and do not believe in the efficacy of midnight meetings, will draw their own conclusions as to the value of a volume which must have cost something considerable for print and paper. When we read that 'the number of suspected persons also shows a decrease,' the only inference we would venture to draw is, that there has been a failure in the suspecting powers of the police. Besides the three classes already mentioned, 'receivers of stolen property,' and 'vagrants and tramps,' are also reckoned as criminal.

"Taking the totals of the five classes for certain districts, results are attained which are curious if true. It appears that in the metropolitan district—which includes an average radius of fifteen miles round Charing Cross, and contains a population of upwards of 3,000,000—there are 12,389 of 'criminal classes,' of which, 5,689 are prostitutes, so that the total number of thieves, receivers, &c., is only 6,700. This result will not appear less remarkable, on observing that the metropolitan and city police amounted for the year to 7,331, or considerably more than one policeman for every person who either is, or is suspected to be criminal; and yet nobody is likely to contend that these forces are at all too numerous. Another district is made of certain 'pleasure towns,' which are grouped together for comparison with other groups of towns which devote themselves to business. There are seven of these pleasure towns, among them are Brighton and Scarborough. It is certainly surprising to find that, according to these returns, the criminal classes avail themselves extensively of medicinal waters and sea-bathing, so that in a district which comprises what are called 'health resorts,' these classes are nearly four times as numerous as they are in the metropolitan district.

"Another result, which shall be stated in the compiler's words, is that 'with regard to the number of prostitutes taken separately, it is the highest in the commercial ports, and lowest in the seats of hardware manufactures.' The former branch of this statement is consistent with common knowledge; but the latter presents so much difficulty, that it must be considered very fortunate that the Social Science Congress meets this year at Sheffield, where the connection between knife-grinding and virtue may be most conveniently investigated, and where every facility will doubtless be afforded for any excursions into the neighbourhood which may be considered necessary for the elucidation of this subject.

"It is a pity that those who have a taste for this kind of work cannot be content with operating upon figures which are certain, and not merely conjectural. There can be no mistake in the number of persons prosecuted and persons convicted in a year; and it is a striking and unquestionable deduction from these numbers, that the proportion of women convicted to women prosecuted, is considerably less than that of men. The proportion of women convicted to women prosecuted, is

58·1 per cent., whereas the proportion of men convicted to men prosecuted, is 70·7 per cent., so that the difference between the two proportions is 12·6 per cent. It will probably have been remarked by any person who has frequented criminal courts, that juries are not insensible to influences which commonly operate upon other men; and that acquittals are apt to occur, on trials of women who are young and at all good looking, which scarcely appear warranted by the evidence. The figures above quoted refer, we believe, only to summary convictions before justices; but it is probable that these figures do not overstate the chances which women have of escape on trials by juries. We know that there is a force operating which is likely to produce a certain effect, and we find on examination of observed results, that this effect has been produced, not in one year only, but in every year for which returns appear. The difference between the two proportions—which in 1864 was 12·6 per cent.—has in some former years been as high as 15 per cent., so that it appears women do not yet get off on criminal trials quite as easily as they used to do. If any person chooses to draw from this observation the inference that juries, or justices, have become more intelligent or philosophical, or conscientious, we can only say that conclusions of about equal value are often put forward with much parade by those who have a passion for statistics. We think, however, that it would be quite as reasonable to infer that women are not so young or not so pretty as they used to be.

"The latter end of the volume is devoted to returns from the civil courts, and here we find many particulars which are at once curious and credible. In the county courts, 95·9 of the judgments given were for the plaintiff. This remarkable statement will appear almost astonishing, when it is added that, of the number of plaints entered, 45·6 per cent. were settled out of court. We may assume that in nearly all these settled cases the plaintiff got something without having to fight for it. In the remaining 54·4 per cent. of plaints entered, he got by fighting what he claimed, or part of it almost invariably.

"One might suppose, after reading these figures, that an unsuccessful plaintiff in a county court would be as rare a creature as a dodo, and yet a specimen is occasionally met with. It happens too, that in one or two instances where decisions of county court cases have violently conflicted with legal notions, the decision has been against the plaintiff. These exceptions, however, serve to show the prevalence of the rule. If judges make mistakes, they are as likely to make them one way as the other, but there seems to be an influence at work which seems to counteract this tendency when it would otherwise operate against the plaintiff. It will scarcely be believed that in spite of all this encouragement to come into the county courts, 'the number of plaints entered continues to show a considerable decrease.' The number in 1864 is less than the average of the five previous years by 8·7 per cent. It would be difficult to say what more the county court judges could do to make their courts popular. The advantages which they offer become more striking by observing that in the courts at Westminster, where there were 1,565 verdicts for the plaintiff, the verdicts for the defendant and (which are practically the same thing) nonsuits were 355, or more than 18 per cent. of the whole number tried.

"If we take into account cases which have ended in references, discharge of juries, withdrawal of jurors, &c., it would appear that the defendant's chance of success in the superior courts is considerably better than is represented by this 18 per cent., whereas in the county courts it is less than 5 per cent.

"Considering that in all ordinary cases a plaintiff may choose whether he will proceed in the Queen's Bench, the Common Pleas, or the Exchequer, it would be interesting to inquire whether there are any causes at work to attract business into one of these courts in preference to the others. As each court has five judges, and all are appointed in the same way, and from the same class, it may be supposed that the average of intellectual and moral qualities is nearly the same in all the courts. The sittings at *nisi prius* in Westminster and London, are ordinarily held by the chief judges of the courts, and it may be conjectured that plaintiffs in London cases choose their courts with some reference to this consideration. In country cases the trial takes place before any judge of any court who happens to go the

circuit to which the case belongs, and therefore any attempt to choose a court by reference to the judges of it, would be useless. These observations will show the value of a return of the number of cases entered for trial in the three courts at Westminster, which were respectively 839, 838, and 824. The cases entered for trial at *nisi prius*, were 484, 303, and 535, the last and largest number belonging to the Court of Exchequer. Perhaps it would not be an unfair inference from these figures that, in cases where it is possible to choose the judge who shall try, there is no preference for one court over another; but in cases where this is not possible, the Exchequer is preferred for some reason other than the character of the judges. The same general preference for the Exchequer is shown by the numbers of the writs for summons issued, which were in round numbers, for the three courts respectively, 34,000, 32,000, and 46,000. As regards preference for one court over another where the amount claimed is large, some information is conveyed by the totals of amounts recovered in trials at Westminster, which were—for the Queen's Bench, 48,000*l.*; for the Common Pleas, 70,000*l.*; and for the Exchequer, 42,000*l.* These figures appear to suggest the conclusion that the judges of the Common Pleas stand highest in professional estimation.

"The enormous magnitude of the operations of the Court of Chancery may be inferred from the amount of cash and securities paid and transferred into that court in a year, which was very nearly 21,000,000*l.* The number of suits instituted in 1864, was almost exactly the same as the average number for the five preceeding years. The view which the judges and counsel of the court take of a change which was supposed by its authors to be an improvement may be inferred from the statement that the number of causes tried by the court with juries was three in a-year. It will appear, on examination of the statistics of the court of Divorce and of the Court of Bankruptcy, that the former enjoys an ever-increasing popularity, and that the latter deserves all that has been said in condemnation of it. In future volumes of this series, the progress of the important experiment of giving equitable jurisdiction to county courts will be recorded. We should receive such volumes with greater satisfaction if they contained only actual, and not imaginary, statistics."

VIII.—*The National Debt and the Finances of the United States.*

The following statement of the amount of debt incurred by the Federal Government in carrying on the recent war, appeared as a leading article in the *Times* of the 14th October last:—

"The mysteries of American finance are becoming gradually clear. It is now confessed, and there is no discredit in the confession, that the authorities of the Federal treasury were afraid to reveal the whole truth while the war continued and the issue remained uncertain. The facts, even if they could have been exactly ascertained, would have been too alarming for publication under circumstances so critical, and the statement has been reserved accordingly for the hour of success and confidence. The Americans owe just 600,000,000*l.* That, allowing for a few outstanding demands, is the amount of their national debt, and it represents simply and exactly the cost of their war. All that they spent upon the war they borrowed. Not one penny of the charge was defrayed out of the taxes of the year. The revenue raised from taxation was all consumed in the extraordinary expenses of civil administration incidental to the contest, leaving the actual cost of the campaigns to be met by loans. By a rough approximation it is computed that in the four years of fighting the army cost 530,000,000*l.* and the navy 70,000,000*l.*, and that is the whole of the account.

"The next question concerns the revenue by which the future expenditure is to be met, and here also we are furnished with definite statements. The Americans

calculate upon raising by taxation an annual income of 80,000,000*l.*, which, they say, will not only pay the interest upon the public debt with all other charges of the year, but leave a surplus of 10,000,000*l.* besides. The account for the ensuing year, translated into the language and notation of our own budget, would be as follows :—

	£
Army estimates	20,000,000
Navy ,,	7,000,000
Interest on national debt	31,000,000
Civil list and miscellaneous	12,000,000
Total	70,000,000

"These out-goings balanced against an income of 80,000,000*l.* would certainly leave a much larger surplus than our Chancellors of the Exchequer are in the habit of providing, and we can now subjoin the items of which the anticipated revenue will be composed. They run thus :—

	£
Customs	16,000,000
Internal revenue	60,000,000
Miscellaneous	4,000,000
Total	80,000,000

"Upon both these estimates, however, as well of outlay as of income, it is desirable to offer some remarks. The expenditure, it seems to us, is reckoned with a liberality verging upon extravagance. We do not see, for instance, why the army should cost half as much again as our own, since it is to be immediately reduced to 125,000 men. Probably there is a heavy dead-weight now attached to this charge, but pensions are included in the miscellaneous outgoings, so that the 20,000,000*l.* would seem to be demanded for the effective service only. Then, though the navy is to be reduced to one-tenth of its strength during the war, and the establishment of seamen is put at 10,000 only, the charge is calculated at 7,000,000*l.*, being more than three times the cost of the service before the war, and a good two-thirds of our own estimates, which provide for 70,000 seamen and marines. The interest of the debt is reckoned at a little over 5 per cent. on the whole, which is probably a fair computation, and the remaining charges will be covered, we suppose, by the appropriations assigned to them. Altogether, we can very well believe that the sum of 70,000,000*l.* will suffice to defray the public expenses of the United States in years to come.

"About the revenue, however, there is rather more obscurity. We need not take much exception to the estimate of Customs, though the Americans have never yet raised 16,000,000*l.* from this source, and we know from our own experience how apt a high tariff is to defeat its own objects. But the 60,000,000*l.*, expected from 'internal revenue' must be of doubtful certainty, and the item is all the more enigmatical from its very comprehensiveness. Its two chief ingredients must be income tax and excise, but in what proportions we are left to conjecture. The sum is very large—equal to our entire revenue ten years ago, and forming three-fourths of the whole income of the Union. If it fails, or falls short of the estimated yield, the whole budget may be upset. Another remark which may be made on these figures is that we do not know whether the produce is gross or net—whether the costs of collection have to be deducted or not. However, the general statement is easily intelligible, and, as far as the propositions go, the financial scheme is creditable to the American treasury.

"Nor is there any reason for doubting that the Americans can, if they will, sustain the taxation which these estimates assume. Their resources are enormous, and their energies inexhaustible, but the prospect, for all that, is a very serious

one. We are about the best taxed people in the world, and yet we have never in these times raised 80,000,000*l.* a-year by taxation. In the years 1855-56 our expenditure exceeded that sum, but 72,000,000*l.* was the utmost that we paid, leaving the rest to be borrowed. The Americans are even yet unused to the full weight of heavy taxes. They have never yet raised as much as 30,000,000*l.* from 'internal revenue;' they only estimated their receipts at 25,000,000*l.* in the last year for which accounts are made up. All through the war their taxing machinery was extended and strengthened and improved, but they were so new to the business that it never got into order or produced much result. In 1861 all they raised by taxation was 9,000,000*l.*; in 1862, 11,000,000*l.*; in 1863, 26,000,000*l.*; in 1864, 34,000,000*l.*; and in 1865 they expected to obtain 42,000,000*l.* These figures undoubtedly show the resolution of American financiers to pay more and borrow less, and they exhibit, too, a steady rise of income under the application of the system. Still, it will be observed that even in the very last year of the struggle the results only gave about one-half of the revenue now anticipated as the ordinary produce of a year. In other words, America, now that the war is over and the excitement has subsided, must accept and continue to endure a weight of taxation double that which was imposed in the heat and impulse of the strife.

"This is not an undertaking to be made light of. We have no doubt the Americans can perform it if they choose, and it is certain that every year will bring its portion of relief by increasing the numbers of the taxable population and developing the enormous resources of the State. By and bye, the debt may indeed be a 'flea-bite' to the countless citizens of the Union, but at the present time, be it remembered, these taxes—greater by 10,000,000*l.* a-year than our own—have to be levied from a population smaller than ours, of which one large section has been utterly impoverished. No great revenue can be raised from the unhappy Southerners, who are subsisting upon State rations. It is at first that the pinch will be felt, and we venture to think Mr. McCulloch, though in a right path, is pushing onwards rather too hastily. Up to this time the Americans have been treated by their financiers with extreme, though defensible, indulgence. They had never been taxed by the Supreme Government at all. Their State and municipal taxes were considerable, but before the war the Government wanted but little, and got that little out of Customs. In the way of excise or direct taxation not one sixpence was ever levied. All this department of revenue had to be created from nothing, and the authorities were not only new to the work, but were naturally apprehensive of provoking resistance by the application of so novel a screw. Partly therefore, from necessity, and partly from policy, they resorted moderately to taxation and unsparingly to loans; but now, when the crisis and its passions are past, the system is reversed. Borrowing has ceased, and paying is to begin. The machinery of taxation is in good order and is to be worked at full power, so as to produce not only the whole revenue required for the public service, but 10,000,000*l.* a-year for a sinking fund besides. This will make very heavy work—heavier than we ever undertook ourselves. If the Americans undertake and accomplish it, they will give greater evidence of national capacity than they gave even by their gigantic war."

The *Times* in a subsequent article written upon further intelligence, corrects in two very material points the information given above. The passage, taken from the *Times* of the 16th November, is reprinted here:—

"The actual income of the American Government for the quarter ending at Michaelmas last, was upwards of 29,000,000*l.*, representing a yearly sum of 120,000,000*l.* instead of 80,000,000*l.*, or in excess of 50 per cent. above the estimate. At the same time Mr. McCulloch had reduced his estimate of the year's expenditure to 52,000,000*l.* in place of 70,000,000*l.*, so that the gain would be equally remarkable on both sides of the sheet. Nor are these new figures to be necessarily suspected. We observed at the time that the calculation of 70,000,000*l.* as the expenditure of an ordinary year was so liberal as to savour of extravagance,

and that it would probably be found to admit of reductions when brought to the test."

The next article, upon the report of the Secretary of the Treasury, is also taken from the *Times;* it appeared in the impression of the 18th December :—

"The report which Mr. McCulloch, the Secretary of the Treasury, has addressed to the House of Representatives is a very long but a very able document. Its length is a necessary consequence of the financial position of the Union. As long as the war lasted the first and main object of each successive secretary was to get money; the Federal executive were in the position of a man whose house has caught fire, and who therefore enrols assistants for suppressing the flames without any very nice "higgling" of the market; he makes the best terms he can, and if he has not ready money at his banker's he is prepared to go into debt as the less of two evils, and it must be confessed that the United States did go into debt in a very royal, or perhaps we should say, in a very republican fashion. Now, however, the great danger is removed, a time has arrived for reviewing calmly what was done during a period of great excitement, and for bringing order out of the confusion which has followed the hasty measures and legislation of the past. Mr. McCulloch has a great task before him, and it is obvious that it is his policy as well as his duty to make the Congress fully acquainted with the existing state of affairs. This he has accomplished in a report to the Speaker of the House of Representatives, which is very voluminous, but is more remarkable among similar official documents of the States as being grounded on sound financial principles. There are, indeed, some passages in it of questionable accuracy, some anticipations which are, perhaps, too sanguine to be fully realized; but we recognize in Mr. McCulloch a real financier, applying to the facts before him methods warranted by economic teaching and by the experience of other nations.

"The Union has, without doubt, come out of the civil war stronger than ever; but he would be a very injudicious friend who would deny that it bears, and must long bear, the scars of the conflict. The Federation is burdened with an enormous debt; its home and foreign commerce is disordered by a currency ruinously inflated, and the industry of its citizens is crippled by a minute and inquisitorial system of taxation. Mr. McCulloch reviews in turn each of these evils, and he busies himself in inquiring how the currency may be reduced, the burden of the debt lessened, and the taxes simplified. He very properly attacks the question of the currency first. The Union has now arrived at such a position that the increase of the debt may be said to have stopped. There will be some deficiency in the year which ends next Midsummer, but the deficiency will be converted into a surplus in the year ending on the 30th of June, 1867. As far as the debt and taxes of the nation are concerned, things might be left as at present without bad becoming worse. It is otherwise with the currency. The paper circulation of the United States on the 31st of October was 146,340,000*l.*, out of which about 91 millions consisted of United States' notes issued direct from the Treasury, 37 millions consisted of notes put into circulation through the national banks, 13 millions had been issued by State banks, and about 6 millions circulated in the form of compound interest notes issued by the Treasury, which had been declared legal tender. This enormous aggregate is, moreover, liable to an increase of 23 millions, which have still to be issued in notes circulated through the national banks. The paper money in the Union will, therefore, soon amount to about 170 millions, instead of something less than 42 millions, at which it stood in 1860. Mr. McCulloch urges upon Congress two reasons why this inflation should be abated. The first we may dismiss as one the force of which is purely domestic, though it may on that account have the greater weight in the House and Senate. Mr. McCulloch is of opinion that issuing irredeemable notes and making them legal tender is a function which the constitution does not confer on the executive, except as a war measure, and to continue to issue such notes when war has ceased would be illegal. There are sound reasons

why no government should be vested with the enormous power of issuing irredeemable paper, but we are more concerned with Mr. McCulloch's second argument against maintaining the currency of the States in its present condition. 'There is,' he writes, 'an immense volume of paper money in circulation—under the influence of which prices, already enormously high, are steadily advancing, and speculation is increasing—which must be contracted if disasters similar to the crises of 1837 and 1857 would be avoided.' Prices are, in fact, he declares, higher now with gold at 47 premium than they were when gold was at 185, and the plethora of paper is not only producing waste and extravagance, but a spirit of speculation which is subverting the real industry of the country. Unless something be done, the evil at no distant day will culminate in widespread disaster, and in the opinion of the secretary the only remedy is to be found in the reduction of the currency. He therefore asks for power to fund the compound interest notes and the United States' notes at his discretion, by issuing bonds bearing interest at rates not exceeding 6 per cent., and he quiets those who might be alarmed at the proposal to confer such ample powers, by assuring them that the speed at which he may be able to reduce the currency may be great enough to prevent disaster, but not to produce disorder.

"It is an epoch in the republic when a Secretary to the Treasury is bold enough to denounce irredeemable issues, and to declare that the business of the States, far from being in a healthy condition, is 'speculative, feverish, uncertain.' Such words coming from English critics might be, and have been, misconstrued; but we hope that Mr. McCulloch's authority will arrest attention to them. It is, however, evident that the exchange of a funded debt for an inflated currency is a material element in estimating the financial position of the Union in the future. The public debt of the States on the 31st of October last (including the national currency) was 561,710,000*l.* The estimated deficiency of the nine months ending on the 30th of June next is 22,240,000*l.*; and it may be said in round numbers that the debt of the States will amount to six hundred millions. If taxes be maintained as at present, the budget for the year ending the 30th of June, 1867, would show an income of 79,200,000*l.* and an expenditure of 56,863,000*l.*, including a charge of 28,300,000*l.* for interest on the public debt. There would, therefore, be a surplus of more than 22 millions applicable to the reduction of the principal of the debt. The funding of the currency would increase the charge for interest; but Mr. McCulloch believes that the funding could be effected at the rate of 5 or 5½ per cent., so that, allowing for some portion of the debt remaining in the form of redeemable notes, the whole charge would not amount to more than 30 millions a-year. The existing system of taxation is, however, open to the gravest objections. They have been already so fully pointed out on this side of the Atlantic, that it is enough to cite Mr. McCulloch's words in support of views we have expressed. 'The multiplicity of objects,' he says, 'subject to taxation, is one of the most serious objections to the present system. Many of them yield little revenue, while its collection is troublesome to the collector and irritating and offensive to the taxpayers; and after stating that he had, under the authority of an Act of Congress, appointed Commissioners to examine the taxation of the nation, he adds:—'The Secretary is informed by the Commissioners that it seems certain that without any increase in the rate of taxation, but by the enactment of some modifications and amendments of the present law, coupled possibly even with some reduction in the rates, an increase of revenue from comparatively few sources to the extent of 10,000,000*l.* or 12,000,000*l.* over and above that now obtained may be confidently relied upon. If this should be the case, an early repeal of a multitude of small taxes which, from the inquisitorial character of their method of collection, have become extremely odious and objectionable, will be advisable.' We may assume, therefore, that it will be possible to simplify the internal revenue law of the Union by repealing taxes unproductive and otherwise objectionable, without endangering the surplus revenue which the present system would yield if preserved, and Mr. McCulloch wishes it to be laid down by Congress as a principle of action, that a surplus of forty millions over and above the expenses of Government should

be secured and applied in the payment of interest and the reduction of the national debt. In the first year the interest may be reckoned, as we have already stated, at 30 millions, and 10 millions of capital would therefore be paid off; but the proportion of capital liquidated would constantly increase, and in about thirty years the whole of it might be redeemed. This would be accomplished without having recourse to the device of a sinking fund, which Mr. McCulloch expressly rejects. The recommendation of the Secretary of the Treasury to the Congress may therefore be briefly stated as comprising a large funding of the paper currency, a simplification of the machinery, but a maintenance of the amount of taxation, and a gradual redemption of the national debt.

"There are many points in Mr. McCulloch's plans which invite comment, but at present we must be satisfied with stating the plans themselves. It must, however, be noticed that the possibility of keeping the average rate of interest on the national debt of the Union as low as 5 per cent. depends upon the exemption of the national creditors from all State taxation. Were the holders of the bonds of the Union subject, like their fellow-citizens, to taxation with their several States, and also to taxation in respect of their capital invested in such securities, the bonds could not, in Mr. McCulloch's opinion, be issued at less than 8 per cent. interest. Mr. McCulloch defends the exemption of these bonds from State taxation, but his reasoning appears inconclusive, and it is known that the exemption will be severely attacked in Congress. But the point in Mr. McCulloch's scheme, which must strike Englishmen most forcibly, is the confidence with which he invites the action of the executive. He asks for unlimited power in the way of funding the paper currency, and he asks that a surplus commencing at 10 millions, and gradually increasing to 40 millions, may be intrusted to the Government for the time being. That such things should be asked for is surprising, but if the representatives of tax-payers are found willing to grant them we may well be astonished. Whatever may be the issue, the course of financial discussion in the States during the current Session of Congress may be watched by us with advantage, as those who are in much the same position may learn by the experience of others."

MARRIAGES, BIRTHS, AND DEATHS IN THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES IN THE QUARTER ENDED 30TH JUNE, 1865, AND BIRTHS AND DEATHS IN THE QUARTER ENDED 30TH SEPTEMBER, 1865.

The United Kingdom.—The *Registers* of the *United Kingdom* show that 114,328 persons *married* in the quarter that ended in *June* last; that the *births* of 243,119 children, and the *deaths* of 148,167 persons of both sexes, were registered in the three months ending on *September* 30th. The natural recorded increase of population in 92 days was 94,952, or 1,032 daily. Exclusive of 11,490 foreigners, 53,564 emigrants sailed from these islands in the same period. So about 582 emigrants left daily; and allowing for defects in registration, which has only recently been established in Ireland, the increase at home has been about 506 daily.

The death-rate of the United Kingdom differs little from the average of England and Wales to be here discussed; while the several facts concerning the other divisions of the kingdom are fully set forth in the reports of the Registrar-General of Scotland and the Registrar-General of Ireland.

ENGLAND:—MARRIAGES, BIRTHS, *and* DEATHS, *returned in the Years* 1859-65, *and in the* QUARTERS *of those Years.*

Calendar YEARS, 1859-65:—*Numbers.*

Years.....	'65.	'64.	'63.	'62.	'61.	'60.	'59.
Marriages No.	—	180,263	173,510	164,030	163,706	170,156	167,723
Births..... ,,	—	739,763	727,417	712,684	696,406	684,048	689,881
Deaths..... ,,	—	495,520	473,837	436,566	435,114	422,721	440,781

QUARTERS *of each Calendar Year*, 1859-65.

(I.) MARRIAGES:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	36,835	37,948	35,528	33,953	33,274	35,150	35,382
June ..... ,,	45,772	44,596	44,146	40,853	42,012	43,777	42,042
Septmbr..... ,,	—	44,650	41,932	40,600	39,884	40,541	39,803
Decmbr. .... ,,	—	53,069	51,904	48,624	48,536	50,688	50,496

QUARTERS *of each Calendar Year*, 1859–65.

(II.) BIRTHS:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No	194,287	192,926	186,341	181,990	172,933	183,180	175,532
June ..... ,,	192,921	188,641	189,340	185,554	184,820	174,028	175,864
Septmbr..... ,,	181,642	180,752	173,439	172,709	172,033	164,121	168,394
Decmbr. .... ,,	—	177,444	178,297	172,431	166,620	162,719	170,091

(III.) DEATHS:—*Numbers.*

Qrs. ended last day of	'65.	'64.	'63.	'62.	'61.	'60.	'59.
March .....No.	140,646	143,030	128,096	122,019	121,215	122,617	121,580
June ..... ,,	116,006	116,899	118,121	107,392	107,558	110,869	105,631
Septmbr..... ,,	113,404	112,133	112,504	92,381	101,232	86,312	104,216
Decmbr. .... ,,	—	123,458	115,116	114,774	105,109	102,923	109,354

The estimated population in 1865 of England, Scotland, and Ireland, is 29,772,294. The death-rate of the quarter is 1·974 per cent.

England.—This Return comprises the BIRTHS and DEATHS registered by 2,200 Registrars in all the districts of England during the summer quarter that ended on September 30th, 1865; and the MARRIAGES in 12,791 churches or chapels, about 5,272 registered places of worship unconnected with the Established Church, and 641 Superintendent Registrars' offices, in the quarter that ended on June 30th, 1865.

The marriages in the spring quarter of the year were more numerous than they had ever been before; and this implies that the great body of the people were prosperous. In the last summer quarter ending on September 30th, the birth-rate exceeded the average; and the death-rate also exceeded the average rate of the corresponding quarter of ten previous years. Many districts suffered from scarlatina and other epidemics during the two years 1863-64, and the mortality has been exceptionally high during the last three summers.

During the last three months scarlatina was epidemic in many places. Diarrhœa was prevalent, and often fatal to children; and scattered cases of summer cholera were as usual fatal in unhealthy districts. At the end of the quarter four deaths from cholera occurred in Southampton, two of which were pronounced epidemic cholera. The meteorology of the season has been extraordinary, the potato has in many places been blighted, and the cattle have, to an extent unknown, been struck down by zymotic disease; yet the people have been hitherto untouched by pestilence. While Marseilles and Paris are smitten by cholera, London and the large cities of the United Kingdom remain unassailed.

MARRIAGES.—91,544 persons married in the quarter that ended on June 30th. The marriage-rate was 1·752, or ·065 above the quarterly average.

The increase of marriages occurred chiefly in London, the eastern counties, Shropshire, Leicestershire, Yorkshire, Durham, Northumberland, and South Wales. The marriages declined in Lancashire: while there was some depression in the cotton manufacturing districts, there was increased activity among the woollen manufacturers. The demand for coal and iron increases every year. The effects are plainly traceable in the marriage registers.

ENGLAND:—*Annual Rates per Cent. of* PERSONS MARRIED, BIRTHS, *and* DEATHS, *during the* YEARS 1859-65, *and the* QUARTERS *of those Years.*

Calendar YEARS, 1859-65:—*General Percentage Results.*

YEARS	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
Estmtd. Popln. of England *in thousands* in middle of each Year....	20,991	—	20,772	20,554	20,336	20,119	19,903	19,687
Persons Married Per ct.	—	1·663	1·736	1·688	1·614	1·628	1·710	1·704
Births .... ,,	—	3·464	3·561	3·539	3·504	3·461	3·437	3·504
Deaths.... ,,	—	2·216	2·385	2·305	2·147	2·163	2·124	2·239

QUARTERS *of each Calendar Year*, 1859-65.

(I.) PERSONS MARRIED:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	1·428	1·381	1·472	1·408	1·360	1·346	1·422	1·464
June..... ,,	1·752	1·687	1·724	1·726	1·614	1·678	1·766	1·716
Septmbr. ,,	—	1·605	1·704	1·616	1·582	1·570	1·614	1·602
Decmbr. ,,	—	1·963	2·020	1·996	1·890	1·906	2·012	2·026

(II.) BIRTHS:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	3·768	3·627	3·740	3·691	3·644	3·500	3·707	3·631
June .... ,,	3·691	3·603	3·647	3·700	3·665	3·690	3·512	3·588
Septmbr. ,,	3·429	3·325	3·447	3·343	3·365	3·388	3·267	3·389
Decmbr. ,,	—	3·297	3·376	3·428	3·350	3·272	3·230	3·414

(III.) DEATHS:—*Percentages.*

Qrs. ended last day of	'65.	Mean '55-'64.	'64.	'63.	'62.	'61.	'60.	'59.
March....Per ct.	2·728	2·522	2·773	2·538	2·443	2·453	2·481	2·515
June..... ,,	2·220	2·191	2·260	2·308	2·121	2·147	2·237	2·155
Septmbr. ,,	2·141	1·972	2·139	2·169	1·800	1·994	1·718	2·097
Decmbr. ,,	—	2·180	2·349	2·213	2·230	2·064	2·043	2·195

Births.—181,642 births were registered in the three months ending with September. It is the highest number that has ever been registered in any summer quarter. The mean daily number of births was 1,974; that is 82 hourly, or more than one birth a minute.

The births exceeded by 8,203 and 890 the births registered in the corresponding quarters of the two previous years; the chief increase since 1863 being in London, Lancashire, Yorkshire (West Riding), Durham, and Wales.

The birth-rate of the quarter is 3·429, that is ·104 above the average of 3·325,

Increase of Population.—As the births were 181,642 and the deaths 113,404, the natural increase of population in 92 days was 68,238, or 742 daily. The migration from one part of the United Kingdom to another is unrecorded; but England every year is joined by a certain number of recruits from Scotland and Ireland.

About 19,256 emigrants of English origin sailed in the 92 days from the ports of the United Kingdom, at which there are Government emigration officers; 9,447 sailed to the United States, 2,311 to the North American Colonies, 6,018 to Australasia, and 1,480 to other places; on an average 209 English emigrants left these shores daily.*

Prices, Pauperism, and the Weather.—The average price of wheat was 43*s.* 3*d.* a quarter during the last three months ending with September 30th; thus it is a shilling a quarter higher than in the corresponding season of 1864, and 2*s.* 4*d.* lower than in that of 1863. The price of wheat has been remarkably steady during the two years, the three months average ranging little above or below the average (40*s.* 9*d.*) of the whole period. The best potatoes at the Waterside Market, Southwark, sold on an average at 85*s.* a ton; so the price was lower by 15*s.* than it was in the corresponding quarter of last year, and somewhat lower than the prices of the same season in 1863.

The average prices of the best mutton by the carcase in the corresponding summer months of 1863, 1864, 1865 rose from $6\frac{3}{4}d.$ to 7*d.* and finally to $8\frac{3}{4}d.$ per lb. The price of inferior qualities rose from $4\frac{3}{4}d.$ to $5\frac{1}{2}d.$ and to $6\frac{1}{4}d.$ per lb. The best beef, notwithstanding the panic, which the retail butchers have turned to account, rose in the same periods only from $6\frac{1}{4}d.$ to $6\frac{1}{2}d.$ and to 7*d.* per lb. The prices of the inferior qualities remaining steadily at $4\frac{1}{2}d.$ per lb. during the three last summers. If the importation of cattle had been stopped, prices would, probably, have been very different.

A gratifying reduction of pauperism is observable during the three summers; the numbers of in-door and out-door poor fell from 939,984 to 855,039 and to 836,761. Within the interval of two years 103,223 paupers were struck off the relief rolls, without, we may hope, any inhumanity on the part of the poor law administrators.

The weather of the summer quarter was remarkable. The temperature of July was 2°·4 above the average of 94 years, and the temperature of September, when the sun no longer rises to the same height, and no longer shines so many hours, was higher than the temperature of July. There was little rain in September; the blue sky was cloudless, and the air was unusually dry; but the dews were copious, and fog was prevalent on twenty days. To find a September of which the temperature approaches 63°·9, Mr. Glaisher travels back to the year 1815, when the temperature was 62°·3; and in all the years since 1771 he does not find its parallel. The temperature of August was below the average; but notwithstanding the temporary depression, the temperature of the six months from April to September exceeds any on record since the same remote date. It was approached

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* Return with which the Registrar-General has been favoured by the Emigration Commissioners: of 65,054 emigrants the origin was undistinguished in 1,794 cases, which have been distributed by calculation.

within a little by the temperature of the same months of 1846. Both years had in them something of a tropical character.

CONSOLS, PROVISIONS, PAUPERISM, *and* TEMPERATURE, *in each of the Nine* QUARTERS *ended 30th September*, 1865.

1	2	3	4	5	6	7	8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the *Mean* Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism. Quarterly Average of the Number of Paupers relieved on the *last day* of each week.		Mean Temperature.
			Beef.	Mutton.		In-door.	Out-door.	
1863	£	*s.* *d.*	*d.* *d.* *d.*	*d.* *d.* *d.*	*s.* *s.* *s.*			
30 Sept.	93	45 7	4½—6¼ 5⅜	4¾—6¾ 5¾	70—105 87	120,189	819,795	58·8°
31 Dec.	92⅞	40 6	4—6¼ 5⅛	5—7 6	60—80 70	130,072	804,941	46·8
1864								
31 Mar.	91	40 4	4½—6½ 5½	5½—7 6¼	55—70 62	139,606	855,728	37·9
30 June	91⅜	39 7	4¼—6¼ 5¼	5¼—7 6⅛	40—60 50	122,717	785,825	53·1
30 Sept.	89⅛	42 3	4½—6½ 5½	5½—7 6¼	80—120 100	115,698	739,341	59·4
31 Dec.	89⅝	38 5	4½—7 5⅝	5¼—7¼ 6¼	80—95 87	128,322	771,879	43·7
1865								
31 Mar.	89⅜	38 4	4½—7 5¾	5¼—7¼ 6¼	85—97 91	142,329	813,371	36·5
30 June	90⅝	40 6	4¾—6¾ 5¾	6¼—8½ 7⅜	90—115 102	125,846	776,016	56·2
30 Sept.	89⅝	43 3	4½—7 5¾	6¼—8¾ 7½	65—100 85	117,172	719,589	62·5

The rain-fall at Greenwich was 6·5 inches, which is nearly an inch (·9) below the average of 50 years. Rain fell in large quantities at long intervals. The wind on the surface of the earth blew at the rate of eight miles an hour. At all the stations the rain-fall in September was inconsiderable.

The remarks on the season by Mr. Glaisher, who has contributed more than any other living person to the progress of meteorology, will be read with interest.

DEATHS; AND THE STATE OF THE PUBLIC HEALTH.—113,404 deaths were registered in the three months, and the mortality was at the annual rate of 2·141 per cent.; that is ·169 above the average, but differing little from the mortality of the two preceding summer quarters.

This is the result of a balance of high and low rates in the eleven divisions of the kingdom, as is seen in the Table IV of the mortality per 1,000 in the two summer quarters of 1864 and 1865. The rate for all England was 21 in the two seasons. Yorkshire here proclaims aloud in the increasing death-rate her sanitary failings; the summer mortality rose from 24 to 25. In Lancashire and Cheshire the

mortality was 23 and 26. The eastern counties also experienced an increase; so did the northern counties. There is a decisive fall in the mortality of Gloucestershire, Staffordshire, Worcestershire, and Warwickshire, reducing the mortality of the west midland counties from 22 to 19. Various sanitary improvements have been carried out with good effect. This is also the case with London, where the works of the Metropolitan Board are apparently beginning to display their effects. The mortality of London in the summer quarter of last year was at the rate of 24; in the summer of this year it is 22.

Average Annual Rate of Mortality to 1,000 *of the Population in the Eleven Divisions of England in the Ten Years* 1851-60; *in the Summer and Autumn Quarters of* 1864; *and in the Winter, Spring, and Summer Quarters of* 1865.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in					
	Ten Years, 1851-60.	1864.		1865.		
		Summer Quarter.	Autumn Quarter.	Winter Quarter.	Spring Quarter.	Summer Quarter.
I. London	23·63	24·06	26·12	28·46	23·16	21·91
II. South-Eastern counties	19·55	18·66	19·37	24·25	18·82	19·07
III. South Midland ,,	20·44	20·43	22·66	25·39	20·02	20·02
IV. Eastern counties	20·58	19·05	20·86	24·47	20·40	19·75
V. South-Western counties	20·01	18·20	20·67	25·20	20·53	17·14
VI. West Midland ,,	22·35	21·55	23·77	27·15	20·23	19·46
VII. North Midland ,,	21·10	19·23	20·75	25·73	20·52	20·43
VIII. North-Western ,,	25·51	23·22	26·34	30·25	24·69	25·64
IX. Yorkshire	23·09	23·66	25·00	28·01	24·83	25·13
X. Northern counties	21·99	21·14	22·46	26·26	22·63	22·86
XI. Monmouthshire and Wales	21·28	20·17	23·59	29·51	24·75	18·74

The districts of the chief towns, containing an estimated population of 11,757,883, have experienced high rates of mortality; during the three summer quarters the mortality has been at the rate of 24 per 1,000, nearly two above the average. In the remaining districts, with 9,260,260 inhabitants, the mortality declined slightly, and was at the rate of 18 per 1,000 in the last summer. This is *one* over the average of 17. Here also is room for improvement; but many of the towns are Augean stables which the municipal authorities have hitherto failed to sweep out. In their limits *one* death in every *four* is unnatural, according to the finding of these inflexible facts. The eight English cities and boroughs arranged according to the mortality stand for this particular quarter in the following order of insalubrity; Bristol 20, London 22, Birmingham 23, Salford 30, Hull 30, Leeds 32, Manchester 33, and Liverpool 34.

The Registrars mention many outbreaks of scarlatina, and epidemics of fever in some of its forms. The high rate of mortality during the three summers is chiefly due to these diseases. Some of the existing sanitary defects are strikingly illustrated by the Registrar of Whitstable in Kent. In Rotherham the deaths were 398 out of a population in 1861 of 44,350. The registrars call attention to the fever deaths, and to the insufficient supply of water. The mortality is fully accounted for by Dr. Shearman, who explains how the health of the town may be established on solid foundations.

In the face of the cholera epidemic which is gathering in threatening clouds around us, the deaths from that disease and from the allied diarrhœa deserve careful study. Every year since 1837, when the causes of death were first

registered, a certain number of deaths from cholera have been recorded in the registers of various districts of the country. Such cases, often called English, but more properly summer cholera, as they are met with all over Europe, prevail chiefly in the three months of July, August, and September. One hundred and thirty-six cholera deaths were registered in London, and in this quarter's notes a certain number are mentioned by the registrars in every division, except the north midland. One case at Wilsden in Yorkshire was registered "Asiatic cholera;" another in the Rillington sub-district, fatal in twenty-four hours, "presented all the features of Asiatic cholera." All such cases are of ordinary occurrence, and are inexplicable by those who deny the spontaneous origin of sporadic cases. The number of cases at Southampton since the end of the quarter leaves no doubt of the appearance of the epidemic form of cholera, which may either pass over England, or develop in the course of the next twelve months its usual destructive tendency.

It is gratifying to know that London and some other large towns are now in a far better condition to encounter the epidemic than they were either in 1848-49 or in 1853-54, when the disease killed 55,181 and 24,516 persons of both sexes and of all ranks in England and Wales.

ANNUAL RATE *of* MORTALITY *per Cent. in* TOWN *and* COUNTRY DISTRICTS *of* ENGLAND *in each Quarter of the Years* 1865-63.

	Area in Statute Acres.	Population Enumerated.		Quarters ending	Annual Rate of Mortality per Cent. in each Quarter of the Years			
		1851.	1861.		1865.	Mean '55-64.	1864.	1863.
In 142 Districts, and 56 Sub-districts, comprising the *Chief Towns*.....	3,287,151	9,155,964	10,930,841	March	2·881	2·703	2·974	2·706
				June....	2·339	2·324	2·369	2·470
				Sept. ..	2·387	2·192	2·374	2·410
				Dec.....	—	2·430	2·601	2·422
				Year	—	2·412	2·580	2·502
				Year	—	1·987	2·116	2·057
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly *Small Towns* and *Country Parishes*	34,037,732	8,771,645	9,135,383	March	2·514	2·313	2·508	2·323
				June....	2·049	2·037	2·110	2·100
				Sept. ..	1·828	1·714	1·831	1·862
				Dec.....	—	1·885	2·015	1·944

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

Cholera throws men into terrible convulsions, and kills half of its victims in twenty-four hours; but there is a merciful warning of its approaches in probably every instance, the neglect of which is fatal. So it is with the epidemic itself in England. It has hitherto commenced generally about October, and has only proved excessively fatal in the following summer. Thus all our towns have six months notice, and the whole winter for the preparation of defensive works. Every district in the kingdom should at once appoint its health officer.

ENGLAND: — MARRIAGES *Registered in Quarters ended 30th June* 1865-63; *and* BIRTHS *and* DEATHS *in Quarters ended 30th September* 1865-63.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	MARRIAGES in Quarters ended 30th June.		
			'65.	'64.	'63.
ENGLD. & WALES.... *Totals*	37,324,883	No. 20,066,224	No. 45,772	No. 44,596	No. 44,146
I. London	77,997	2,803,989	8,253	7,694	7,803
II. South-Eastern	4,065,935	1,847,661	3,568	3,618	3,663
III. South Midland	3,201,290	1,295,515	2,148	2,159	2,093
IV. Eastern	3,214,099	1,142,562	1,857	1,699	1,660
V. South-Western	4,993,660	1,835,714	3,656	3,583	3,617
VI. West Midland	3,865,332	2,436,568	5,492	5,373	5,390
VII. North Midland	3,540,797	1,288,928	3,016	2,931	2,817
VIII. North-Western	2,000,227	2,935,540	6,942	7,147	7,006
IX. Yorkshire	3,654,636	2,015,541	5,023	4,642	4,536
X. Northern	3,492,322	1,151,372	2,862	2,866	2,751
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,955	2,884	2,810

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th September.			DEATHS in Quarters ended 30th September.		
	'65.	'64.	'63.	'65.	'64.	'63.
ENGLD. & WALES.... *Totals*	No. 181,642	No. 180,752	No. 173,439	No. 113,404	No. 112,133	No. 112,504
I. London	25,711	24,955	24,589	16,682	18,008	17,362
II. South-Eastern	15,560	15,553	14,899	9,383	9,067	9,075
III. South Midland	10,948	10,815	10,562	6,676	6,781	7,033
IV. Eastern	9,015	9,391	8,745	5,751	5,532	6,026
V. South-Western	14,194	14,515	14,422	79,94	8,472	8,712
VI. West Midland	22,452	22,524	21,494	12,656	13,831	13,082
VII. North Midland	11,290	11,314	10,859	6,807	6,371	6,907
VIII. North-Western	28,247	28,199	26,703	20,381	18,159	18,693
IX. Yorkshire	20,315	19,927	18,845	13,444	12,508	12,779
X. Northern	12,194	11,996	11,199	7,150	6,500	6,814
XI. Monmthsh. & Wales	11,716	11,563	11,122	6,480	6,904	6,021

REMARKS ON THE WEATHER

DURING THE QUARTER ENDING 30TH SEPTEMBER, 1865.

By JAMES GLAISHER, ESQ., F.R.S., *&c., Sec. of the British Meteorological Society.*

During the first three weeks of this quarter the weather was unsettled; the temperature of the air was alternately in excess and defect. Rain fell frequently between the 6th and the 18th of July all over the British islands, and during this period harvest work proceeded very slowly; some complaints were heard of bright mildew. The potato crop, which had needed moisture, became very promising after the rain. About the 20th of the month the period changed from a cloudy and wet to one clear and dry, which proved most beneficial to the growing as well as to the maturing crops. Till the 30th day the temperature was in excess to the amount of 2° daily. On the 31st the weather changed again to cold and wet; harvest work was a good deal interrupted, and up to this time no mention was made of the potato disease; but in the first week of August indications of the disease were seen both in Ireland and England. The weather continued unsettled, rain fell heavily in various parts of the country, and the deficiency of daily temperature amounted to 3° daily. Harvest work for several days together was stopped, and much uneasiness was felt as to the crops being greatly damaged, as by far the larger portion of those of the United Kingdom was still standing. The potato crop also displayed increased symptons of disease. On the 20th day the weather improved a little, rain fell, and there were intervals of bright sunshine. From the 20th day to the end of the month the temperature was in excess to the amount of 1° daily. The month of August was very unfavourable to the crops.

With the month of September came an auspicious change, the temperature was high, there was but little cloud, either night or day; the sun shone with great brilliancy, harvest work proceeded simultaneously over England, Ireland, and Scotland. In many places very little rain fell, not amounting in the whole month to one-tenth of an inch; the greatest fall at any place was 1·9 in. at Cockermouth, in Cumberland. The reading of the barometer was remarkably high. The temperature frequently exceeded 80° at places south of 53° latitude, and in some cases to 85°, 86°, and 87°. The average daily excess of temperature for the whole month was $7\frac{1}{4}$°, and proved to be the hottest month of the year.

In consequence of this remarkable weather, the cereal harvest was completed in every part of the United Kingdom earlier than it has been for many years past. The yield of the wheat crop was spoken of as variable both in quality and quantity, and was thought to fall somewhat short of an average.

The mean temperature of these three months was 62°·5; in the year 1859 for the same period, it was 62°·8; in 1857 was 63°·3; in 1846 it was 62°·6; in 1825 was 62°·3; in 1818 was 63°·5; in 1780 was 62°·7, and in 1779 was 63°·2. In all other years back to 1771 it was below 62°.

The mean temperature of July was 63°·8, being 2°·1 above the average of the preceding 24 years, and 2°·0 above that of last year.

The mean temperature of August was 59°·9, being 1°·4 below the average of the preceding 24 years, and 0°·3 above that of last year.

The mean temperature of September was 63°·9, being 7° above the average of the preceding 24 years, and 7° above that of last year.

The temperature of September was remarkable indeed; back to 1771 there is no instance of one so warm; the nearest approach to this high temperature was 60°·3 in 1858; 60°·1 in 1846; 60°·7 in 1818; 62°·3 in 1815; 60·°8 in 1795; and

60°·7 in 1779; so that this month is more than $1\frac{1}{2}$° of higher temperature than any on record.

The mean high day temperatures were above their averages in July and September, to the amounts of 2°·0 and 9°·1; and below it in August to the amount of 1°·9

The mean low night temperatures were above their averages in July and September, to the amounts of 1°·5 and 4°·8, and below it in August to the amount of 1°·6.

Therefore both the day and night temperatures were above their averages in July and September, and were both below in August. The excess of 9° by day and 5° by night in September are very remarkable, in both cases being higher than any before met with.

During the high temperature in September there was less than one-half the usual amount of cloud; the air was bright and clear; there was no meteorological choleraic symptom whatever, and indeed there has been none in the exceptional period of six months from April.

The mean temperature of the air at Greenwich in the three months ending August, constituting the three summer months, was 61°·3, being 1°·2 above the average of the preceding 94 years.

1865. Months.	Temperature of Air. Mean.	Air. Diff. from Average of 94 Years.	Air. Diff. from Average of 24 Years.	Temperature of Evaporation. Mean.	Evaporation. Diff. from Average of 24 Years.	Dew Point. Mean.	Dew Point. Diff. from Average of 24 Years.	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 24 Years.	Water of the Thames	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 24 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour in a Cubic Foot of Air. Diff. from Average of 24 Years.
	°	°	°	°	°	°	°	°	°	°	In.	In.	Gr.	Gr.
July	63·8	+2·4	+2·1	58·6	+1·3	54·2	+0·6	21·4	+0·6	65·9	·421	+·008	4·7	+0·1
Aug.	59·9	−0·8	−1·4	56·4	−1·0	53·4	−0·4	19·4	−0·3	64·2	·409	−·009	4·5	−0·1
Sept.	63·9	+7·5	+7·0	59·5	+5·7	55·9	+5·0	22·8	+4·3	65·7	·447	+·069	5·0	+0·8
Mean.....	62·5	+3·0	+2·6	58·2	+2·0	54·5	+1·7	21·2	+1·5	65·3	·426	+·023	4·7	+0·3

1865. Months.	Degree of Humidity. Mean.	Degree of Humidity. Diff. from Average of 24 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 24 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 24 Years.	Rain. Amnt.	Rain. Diff. from Average of 50 Years.	Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass. Number of Nights it was At or below 30°.	Between 30° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night
			In.	In.	Gr.	Gr.	In.	In.	Miles.				°	°
July	72	− 6	29·796	−·007	527	− 1	2·3	−0·3	212	0	1	30	39·2	60·5
Aug.	80	+ 3	29·712	−·082	529	0	4·0	+1·6	210	0	5	26	36·1	55·3
Sept.	76	− 5	30·071	+·254	531	− 3	0·2	−2·2	157	0	5	25	33·2	59·4
Mean.....	76	− 3	29·860	+·055	529	− 1	Sum 6·5	Sum −0·9	Mean 193	Sum 0	Sum 11	Sum 81	Lowest 33·2	Highst 60·5

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

ENGLAND:—*Meteorological Table, Quarter ended 30th September*, 1865.

1 Names of Stations.	2 Mean Pressure of Dry Air reduced to the Level of the Sea.	3 Highest Reading of the Thermometer.	4 Lowest Reading of the Thermometer.	5 Range of Temperature in the Quarter.	6 Mean Monthly Range of Temperature.	7 Mean Daily Range of Temperature.	8 *Mean Temperature of the Air.*	9 Mean Degree of Humidity.
	in.	°	°	°	°	°	°	
Guernsey	29·593	76·0	51·5	24·5	20·5	9·9	61·1	85
Ventnor	29·649	75.0	47·0	28·0	23·7	9·7	63·6	78
Barnstaple	29·593	83·0	44·0	39·0	34·7	16·0	62·1	88
Royal Observatory	29·614	86·0	40·2	45·8	39·5	21·3	62·5	76
Royston	29·607	85·9	40·2	45·7	40·9	21·3	58·2	80
Lampeter	29·553	85·0	35·5	49·5	44·7	21·2	61·6	87
Diss (Norfolk)	29·614	87·5	39·5	48·0	41·9	23·7	62·7	73
Derby	29·558	83·0	40·0	43·0	39·3	18·1	56·2	84
Liverpool	29·625	77·8	48·1	29·7	25·2	10·4	60·5	78
Wakefield	29·622	84·7	38·7	46·0	41·2	22·0	60·7	73
Stonyhurst	29·552	80·7	39·9	40·8	34·6	17·4	58·3	83
North Shields	29·643	75·7	42·2	33·5	29·3	12·5	57·3	81

10 Names of Stations.	11 Wind. Mean estimated Strength.	12 Wind. Relative Proportion of N.	13 E.	14 S.	15 W.	16 Mean Amount of Cloud.	17 Rain. Number of Days on which it fell.	18 Rain. Amount collected.
								in.
Guernsey	1·2	7	6	8	10	3·5	23	5·9
Ventnor	—	3	9	5	14	—	36	3·9
Barnstaple	—	3	5	9	14	3·5	33	7·8
Royal Observatory	0·1	5	4	8	14	5·6	29	6·5
Royston	—	6	4	9	12	5·0	43	7·9
Lampeter	0·6	4	5	10	12	6·1	34	9·9
Diss (Norfolk)	1·0	5	6	11	9	5·0	31	9·4
Derby	—	5	5	6	15	—	35	6·2
Liverpool	1·3	6	5	10	10	5·4	32	6·4
Wakefield	1·6	4	4	10	13	5·7	38	5·8
Stonyhurst	0·5	7	5	8	11	6·5	43	10·1
North Shields	1·5	7	4	9	11	4·5	35	5·4

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER ENDED 30TH SEPTEMBER, 1865.

This Return comprises the BIRTHS, DEATHS, and MARRIAGES registered during the quarter ending 30th September, 1865, in the 1,011 Districts into which Scotland is divided for the purposes of Registration. This return is of a chequered nature; for while the births and marriages have been more numerous in proportion to the population than they have been during the corresponding quarter of the ten previous years, and thus indicate commercial prosperity, the deaths have been much higher than the average, indicating the increasing ravages of disease among the people.

BIRTHS.—27,320 births were registered in Scotland during the third quarter of the year 1865, being in the annual proportion of 348 births in every 10,000 persons of the estimated population. This is a higher proportion than has occurred during any third quarter of the ten previous years, and is greatly above the average proportion, which was at the rate of 333 births in every 10,000 persons. The births in England have also been above the average during the same quarter, though not so high as in Scotland, seeing that 181,642 births were registered in England during the third quarter, being in the proportion of 342 births in every 10,000 of the estimated population.

The town and rural districts exhibited the usual difference in the proportion of their births. Thus, in the 126 town districts (which embrace all the towns with populations of 2,000 and upwards), 15,761 births were registered; while in the 885 rural districts (embracing the remainder of the population of Scotland), only 11,559 births occurred; thus indicating an annual proportion of 437 births in every 10,000 persons in the town districts, but only 315 births, in a like population in the rural districts.

TABLE I.—*Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th September*, 1865.

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9·9						
Northern	7·3	Shetland	4·8	Forfar	14·6	Lanark	8·6
		Orkney	5·0	Perth	10·4	Linlithgow .	9·0
North-Western	5·4	Caithness	10·0	Fife	7·8	Edinburgh .	8·4
		Sutherland....	8·8	Kinross	25·0	Haddington	12·1
North-Eastern	15·0	Ross and Cromarty	2·7	Clackmannan	10·1	Berwick	12·5
East Midland ..	11·5					Peebles.....	7·2
		Inverness	8·2	Stirling	6·8	Selkirk	14·5
West Midland.	7·9	Nairn	10·9	Dumbarton ..	8·5	Roxburgh ..	9·[illegible]
South-Western	8·5	Elgin	11·5	Argyll	9·4	Dumfries	12·[illegible]
		Banff	15·5	Bute	6·7	Kirkcudbright ..	14·9
South-Eastern.	9·2	Aberdeen	15·4	Renfrew.....	7·7		
Southern	13·0	Kincardine....	16·9	Ayr.....	8·1	Wigtown	17·5

Of the 27,320 children born during the quarter, 24,598 were legitimate, and 2,722 illegitimate; being in the proportion of one illegitimate in every 10 births,

or 9·9 per cent. of the births illegitimate. The proportion of illegitimate births was, as usual, lower in the town than in the rural districts; for while only 9·7 per cent. of the births were illegitimate in the town districts, 10·2 per cent. were illegitimate in the rural districts. Table I exhibits the proportion of illegitimate births in the several divisions and counties of Scotland, and generally accords with previous returns; the north-eastern and southern divisions showing, as they have always done, the greatest proportion of illegitimate births. Thus, while only 5·4 per cent. of the births were illegitimate in the north-western, 7·3 per cent. in the northern, and 7·9 per cent. in the west midland divisions, 13 per cent. were illegitimate in the southern, and 15 per cent. in the north-eastern divisions.

Of the children born during the quarter, 14,140 were males, and 13,180 females; being in the proportion of 107 males at birth for every 100 females. 9,403 births were registered in July, 9,074 in August, and 8,843 in September, giving the proportion of 303 births daily during July, 292 daily during August, and 294 daily during September.

Deaths.—15,907 deaths were registered in Scotland during the third quarter of the year 1865, being in the annual proportion of 202 deaths in every 10,000 persons of the estimated population. This is a death-rate considerably higher than the average of the corresponding quarter of the ten previous years, which was only at the rate of 186 deaths in every 10,000 persons. It is, however, below the English death-rate for the same quarter; for in England, during the third quarter, there died 113,404 persons, giving the proportion of 214 deaths in every 10,000 persons of the estimated population.

Table II.—*Number of Births, Deaths, and Marriages in Scotland, and in the Town and Country Districts during the Quarter ending 30th September*, 1865, *and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated, 1865.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,136,057	27,320	3·48	29	2,722	9·9	10·0
126 town districts	1,603,875	1,672,210	15,761	4·37	22	1,536	9·7	10·2
885 rural „	1,458,419	1,463,847	11,559	3·15	31	1,186	10·2	9·7

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated, 1865.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
Scotland	3,062,294	3,136,057	15,907	2·02	49	5,335	0·68	147
126 town districts	1,603,875	1,672,210	10,389	2·48	40	3,728	0·89	112
885 rural „	1,458,419	1,463,847	5,518	1·50	66	1,607	0·43	227

The deaths in the town districts, as usual, greatly exceeded those in the rural districts. Thus, in the 126 town districts, 10,389 deaths were registered; but only 5,518 in the 885 rural districts; thus indicating an annual proportion of

248 deaths in every 10,000 persons in the town districts, but only 150 deaths in the rural districts in a like population.

Of the deaths, 5,595 were registered during July, 5,486 during August, and 4,826 during September; so that the daily deaths in Scotland amounted to 180 in July, 177 in August, and 161 in September.

Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1865 *to* 1861 *inclusive.*

	1865.		1864.		1863.		1862.		1861.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,608	3·65	28,177	3·61	26,729	3·44	27,107	3·51	25,425	3·31
Deaths	20,786	2·65	22,576	2·89	19,227	2·47	19,412	2·51	17,929	2·33
Marriages	54,407	0·69	5,333	0·68	5,090	0·65	4,750	0·61	4,619	0·60
Mean Temperature	35°·3		35°·7		40°·9		38°·8		38°·9	
2nd Quarter—										
Births	30,332	3·86	29,992	3·84	29,651	3·82	28,745	3·73	29,200	3·80
Deaths	17,066	2·17	18,445	2·36	17,947	2·31	17,382	2·25	15,934	2·07
Marriages	5,698	0·72	5,710	0·73	5,557	0·71	5,172	0·67	5,310	0·69
Mean Temperature	51°·5		49°·9		49°·0		49°·4		50°·6	
3rd Quarter—										
Births	27,320	3·48	27,063	3·47	26,362	3·40	25,798	3·34	26,146	3·41
Deaths	15,907	2·02	16,131	2·06	16,249	2·09	14,227	1·84	13,402	1·74
Marriages	5,335	0·68	4,993	0·64	4,863	0·62	4,558	0·59	4,463	0·58
Mean Temperature	57°·5		54°·5		53°·9		54°·4		56°·0	
4th Quarter—										
Births	—	—	27,213	3·49	26,583	3·42	25,484	3·30	26,265	3·42
Deaths	—	—	17,151	2·19	17,998	2·32	16,145	2·09	15,022	1·95
Marriages	—	—	6,639	0·85	6,577	0·84	6,066	0·78	6,436	0·84
Mean Temperature	—		42°·0		43°·6		42°·0		42°·0	
Year—										
Population	3,136,057		3,118,701		3,101,345		3,083,989		3,066,633	
Births	—	—	112,445	3·65	109,325	3·52	107,138	3·47	107,036	3·49
Deaths	—	—	74,303	2·35	71,421	2·30	67,159	2·17	62,287	2·03
Marriages	—	—	22,675	0·72	22,087	0·71	20,544	0·66	20,828	0·67

Increase of the Population.—As the births numbered 27,320 and the deaths 15,907, the natural increase of the population by births was 11,413. From that number ought to be deducted all the emigrants, if their number could be ascertained. From a return furnished to the Registrar-General by the Emigration

Commissioners, it would appear that during the third quarter of the year 1865, there emigrated from the ports of Great Britain and Ireland 65,054 persons, of whom 18,748 were English, 3,934 Scotch, 29,469 Irish, and 11,104 foreigners; while the origin of 1,794 persons, was not distinguished. If to the ascertained Scottish emigrants 111 be added as the proportion of those whose origin was not ascertained, the total number of Scottish emigrants during the quarter would amount to 4,050 persons; and that number deducted from the excess of births over deaths, would leave 7,363 as the increase of the population during the quarter; Making no allowance, however, for the large emigration to England, nor for the drafts to the army, navy, and merchant shipping.

Marriages.—5,335 marriages were registered in Scotland during the quarter ending 30th September, 1865, being in the annual proportion of 68 marriages in every 10,000 persons of the estimated population. This is a proportion very greatly above the average marriage-rate of the quarter during the ten previous years, which was only in the proportion of 59 marriages in every 10,000 persons of the population; but it is still far below the English average, which for the corresponding quarter of the last ten years, was at the rate of 80 marriages in every 10,000 persons.

The marriages in the town districts, as usual, greatly exceeded those in the rural districts, both in number and in proportion to the population. Thus in the 126 town districts there were registered 3,728 marriages, while only 1,607 were entered on the rural registers; thus indicating a proportion of 89 marriages in the town districts for every 10,000 persons, but only 43 marriages in the rural districts in a like population.

Of the 5,335 marriages, 2,395 were registered in July, 1,548 in August, and 1,392 in September.

Health of the Population.—The health of the population has not been satisfactory during the past quarter, and the mortality has been high above its average. The unusually high temperature during June and July, considerably increased the prevalence and fatality of the ordinary bowel complaints; but the sudden change to cold wet weather in August, arrested these complaints, so that even the very warm weather of September did not materially increase them. As yet the epidemic cholera does not appear to have manifested itself in Scotland, though a few severe cases of British cholera, of which a certain number occur every year, have proved fatal. Scarlatina, in many cases of a severe type, has greatly increased over the country; and the various forms of continued fever have shown a strong tendency to increase and assume the epidemic form with the fall of temperature. Measles, on the other hand, appears rather to have declined during the quarter.

Weather.—The weather has been quite anomalous during the quarter, and has presented nothing to correspond with it during the nine years when certain records of it have been kept. July was a warm genial month, with the highest daily temperatures ranging from 74° to 84° in the shade. Heavy showers of rain fell at intervals after the 7th, merely sufficient to refresh vegetation and advance the crops. On the 29th of July, however, a cold period set in, when the mean temperature fell 10° below that of the previous week, and this cold period continued till the 9th of August, the winds during that period being from the north, north-east, and east. This was followed by a rainy period, which continued till the 28th of August, the mean temperature, however, rising again to about 57°. From the 28th of August till the close of September, a sultry, warm, and dry tract of weather prevailed, the heat, on many days, being quite oppressive. Very little wind prevailed during September, and a thick mist or fog which settled over the ground towards the close of the month, seemed to favour the development of mildew, which attacked the turnip crops to a great extent over Scotland; while rinderpest, or the Russian cattle plague, spread over the country, both among dairy and store cattle.

SCOTLAND:—MARRIAGES, BIRTHS, *and* DEATHS *Registered in the Quarter ended 30th September*, 1865.

1 DIVISIONS. (Scotland)	2 AREA in Statute Acres.	3 POPULATION, 1861. (*Persons.*)	4 Marriages.	5 Births.	6 Deaths.
		No.	No.	No.	No.
SCOTLAND.....*Totals*	19,639,377	3,062,294	5,335	27,320	15,907
I. Northern	2,261,622	130,422	96	931	442
II. North-Western	4,739,876	167,329	104	1,146	599
III. North-Eastern	2,429,594	366,783	521	3,241	1,506
IV. East Midland	2,790,492	523,822	891	4,497	2,762
V. West Midland	2,693,176	242,507	345	1,967	1,080
VI. South-Western	1,462,397	1,008,253	2,306	10,227	6,285
VII. South-Eastern	1,192,524	408,962	836	3,683	2,348
VIII. Southern	2,069,696	214,216	236	1,628	885

No. III.—IRELAND.

MARRIAGES IN THE QUARTER ENDED 30TH JUNE, 1865; AND BIRTHS AND DEATHS IN THE QUARTER ENDED 30TH SEPTEMBER, 1865.

This Return includes the MARRIAGES *registered* during April, May, and June; and the BIRTHS and DEATHS *registered* during July, August, and September, 1865, in the 719 Registrars' districts of Ireland. The districts are co-extensive with the Dispensary districts of the 163 Poor Law Unions; which latter form the districts of the Superintendent Registrars.

MARRIAGES.—The marriages *registered* in Ireland in the quarter ending the 30th June last, amounted to 5,661, being equal to an annual ratio of 1 in every 256, or ·390 per cent. of the population;* of these marriages 3,573 were between Roman Catholics (under the 26 and 27 Vic., cap. 90), and 2,088 between Protestants (under the 7 and 8 Vic., cap. 81),—the former number affording an annual ratio of 1 in 315 of the Roman Catholic population,* and the latter of 1 in 154 of the Protestant population.* The number of marriages *registered* in corresponding quarter of last year was 6,029—4,088 of Roman Catholic and 1,941 of Protestant—being on the whole 368 more than were registered during the second quarter of the present year.

* According to the Census of 1861.

Births.—34,158 births were *registered* during the third quarter of 1865—17,572 males and 16,586 females—affording an annual ratio of 1 in every 42·4, or 2·36 per cent. of the population;* the number *registered* in the corresponding quarter of 1864, was 33,892—17,327 males and 16,565 females—being equal to an annual ratio of 1 in 42·8, or 2·34 per cent. of the population.* The births *registered* in the following unions or Superintendent Registrars' districts, afforded the highest ratios for the quarter—Claremorris, 1 in 26; Belfast, 1 in 27; Swineford, 1 in 29; Newtownards and Tobercurry, each, 1 in 32; Dunmanway, Lurgan, and Westport, each, 1 in 33; Clifden, Dromore, West, and Dublin, North, 1 in 34 each; Kilmacthomas, Larne, and Macroom, each, 1 in 35.

In the following unions the births *registered* afforded very low annual ratios—Celbridge, Corrofin, Rathkeale, and Youghal, each, only 1 in 60; Portumna, 1 in 61; Donegal, 1 in 64; Borrisokane and Dunfanaghy, each, 1 in 67; Listowel, 1 in 70; Ballyshannon, 1 in 71; Killadysert, 1 in 79; and Croom, 1 in 83 of the population.* It is to be feared that these very low birth-rates are to be attributed to neglect of the provisions of the registration Act.

Deaths.—The number of deaths *registered* during the quarter ending the 30th September last, amounted to 18,854—9,528 males and 9,326 females—being equal to an annual ratio of 1 in every 76·9 or 1·30 per cent. of the population.* The number *registered* in the corresponding quarter of 1864 was 19,259—9,825 males and 9,434 females—affording an annual ratio of 1 in 75·3 or 1·33 per cent. of the population.* The annual ratio of deaths *registered* was highest in the following unions or Superintendent Registrars' districts, viz.:—Belfast, 1 in 42; Dublin, South, 1 in 45; Dublin, North, 1 in 46; Ennis, 1 in 50; Rathdown and Wexford, each, 1 in 51; and Clonmel, 1 in 55.

The annual ratio afforded by the number of deaths *registered* during the quarter in each of the following fifty-one unions did not exceed 1 in 100 of the population:—Killadysert and Scarriff, each, 1 in 100; Boyle, Castlereagh, Gortin, Monaghan, and Tulla, each, 1 in 101; Manorhamilton, Oldcastle, and Parsonstown, each, 1 in 102; Cashel, Dromore, West, and Fermoy, each, 1 in 103; Lisnaskea, 1 in 104; Strokestown, 1 in 105; Donegal, Glenties, and Milford, each, 1 in 107; Bantry and Swineford, each 1 in 108; Magherafelt, 1 in 109; Oughterard and Rathkeale, each, 1 in 110; Castletown and Clones, each, 1 in 111; Dunmanway, 1 in 112; Donaghmore, 1 in 113; Kenmare and Roscrea, each, 1 in 114; Kells, 1 in 116; Ballinrobe, Newport, and Westport, each, 1 in 116; Carrickmacross, Castlederg, and Skibbereen, each, 1 in 121; Baltinglass, Listowel, and Stranorlar, each, 1 in 122; Mitchelstown, 1 in 126; Tobercurry, 1 in 128; Castlebar, 1 in 132; Bailieborough and Claremorris, each 1 in 134; Bawnboy and Borrisokane, each 1 in 137; Cahersiveen, 1 in 143; Dunfanaghy, 1 in 144; Skull, 1 in 145; Glennamaddy, 1 in 148; and Portumna, 1 in 162.

Emigration.—The number of persons who left the ports of Ireland, stating to the Enumerators "that it was their intention *not to return*," amounted, during the quarter ending the 30th September last, to 27,661, being 5,523 more than the number during the corresponding period of last year; the increase in July amounting to 667; in August, to 1,760; and in September, to 3,096. Of the 27,661 persons who emigrated during the past quarter, 14,730 were males, and 12,931 females.

Estimated Decrease of the Population.—There would appear to be a decrease of 12,357 in the population of Ireland, *estimated* according to the returns of births and deaths *registered* and of emigration received for the past quarter, the deaths (18,854), and the number of emigrants (27,661), amounting to 46,515, whereas the number of births *registered* was only 34,158. The estimated decrease of population in the first quarter of the year was 6,864; during the second quarter it was 22,805; and in the past quarter, as already stated, it was 12,357, making a total decrease for the *nine* months of 42,026 persons.

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* According to the Census of 1861.

Emigration from Ireland during the Months of July, August, and September, in 1865 *and* 1864.

Months.	Number of Emigrants in						*Increase* in 1865 Compared with 1864.
	1865.			1864.			
	Males.	Females.	Total.	Males.	Females.	Total.	Persons.
July	4,841	3,985	8,826	4,157	4,002	8,159	667
August	4,573	4,338	8,911	3,526	3,625	7,151	1,760
September	5,316	4,608	9,924	3,255	3,573	6,828	3,096
Total	14,730	12,931	27,661	10,938	11,200	22,138	5,523

Prices of Provisions and Pauperism.—Provisions, in general, were higher in Dublin during the past quarter than during the corresponding period of last year. The price of Messrs. R. Manders and Co.'s 4-lb. loaf, which was 6*d.* in the first week of the quarter of 1864, fell to 5½*d.* in the last, while in the first week of the past quarter, it was 6*d.*, and in the last week, 6½*d.*; the rise in the price took place in the tenth week. The *average* price of oatmeal at the Dublin Corn Exchange, for the third quarter of 1864, was but 10*s.* 8*d.*; for the past quarter it was 15*s.* 3*d.*, ranging from 14*s.* 3*d.* to 17*s.*, the latter price being obtained in the week ending Saturday, 19th August.

The price of potatoes, at the Dublin Potato Market, for the past quarter, was 2*s.* 8*d.* to 4*s.* per cwt.; in the corresponding quarter of the past year it was somewhat lower, being from 2*s.* 7*d.* to 3*s.* 10*d.*

Beef maintained a very high price during the quarter, the range of price per cwt., during the quarter at the Dublin Cattle Market, being 56*s.* 6*d.* to 67*s.* 6*d.*; the highest weekly quotation, 60*s.* to 72*s.*, was for the week ending 2nd September. The *average* price of beef for the third quarter of last year was 51*s.* to 62*s.* 6*d.* per cwt.

The number of persons in Ireland receiving in-door relief weekly, during the third quarter of 1865, averaged 46,632, being 3,266 less than the average for the corresponding quarter of last year; the number receiving in-door relief on Saturday, 8th July last, was 50,085; the number for Saturday, the 30th September, was 45,384. In the first week of the corresponding quarter of 1864, the number was 54,079; and in the last week it was 48,535. The number of persons receiving out-door relief was greater in each week of the past quarter than in the corresponding weeks of the third quarter of 1864; the weekly average number in the third quarter of 1865, was 9,093, against 7,717 for the corresponding period of 1864.

Health of the People.—The comparative freedom from epidemic disease, the fine dry weather, and in general the good wages and employment of the working classes, all combined to render the quarter ended September 30th unusually healthy.

The mortality during the past quarter was less than in the corresponding period of last year, and much below that of the quarter ended June 30th of the present year.

Fever, which for a considerable time had been prevalent in many parts of the country, was the cause of few deaths, and these chiefly occurred in localities where *sanitary precautions were wholly neglected*, and in which, owing to the continued dry weather, the supply of water was deficient.

The deaths from small-pox were comparatively few, and nearly all the persons who succumbed to the disease had *not been vaccinated*. In the Superintendent Registrar's district of Gortin (Plumb Bridge district), two persons who had not

been vaccinated died from small-pox. The Registrar of Westport states that—"Small-pox made its appearance, but caused only one death, a child, who *had not been vaccinated.*" The decrease in the mortality from small-pox, may be justly attributed to the Compulsory Vaccination Act. Many of the Registrars refer with satisfaction to the efficient manner in which the provisions of the Act are carried out.

Scarlatina prevailed in some districts, and, as usual was very fatal wherever the sewage and other sanitary precautions were defective; for example, in the Union of Banbridge (Dromore district), out of 36 deaths, 10 were referred to scarlatina; the Registrar writes:—"The last-mentioned disease (scarlatina) prevailed in an unusually fatal form during the months of August and September, and was found in almost every case to be *associated with the existence of abominable cesspools and collections of filth about the doors and under the windows of the houses; the houses also being generally damp and ill-ventilated.* One instance, in particular, which I was obliged to lay before the board of guardians, is worthy of note, as showing, with tolerable certainty, the relation these pestilential vats bear to the propagation of scarlet fever. In the midst of a cluster of houses situated on a badly-drained hill side, about two miles from Dromore, were four or five rare specimens of cesspools or gutters, *the stench from which was truly unbearable.* Scarlatina entered three of the families almost simultaneously, and when I visited the place seven cases were prostrated by the fever, and one child already dead. Compulsory measures were at once instituted for the speedy removal of the filth, and the filling up and covering over the pits, and *immediately* the progress of the endemic was arrested; those already ill gradually recovered, and no new case ensued subsequent to the removal of the nuisance."

In the Bray district, Rathdown Superintendent Registrar's district, 16 of the deaths were referred to scarlatina. The Registrar remarks that the disease still prevails, and adds:—"Supply of water, ventilation of houses and sewerage, *very defective in this district amongst the poor.*" In the Superintendent Registrar's district of Ennis (Ennis district No. 1), of 110 deaths registered, 50 were caused by scarlatina. The Registrar states that "*the disease has confined itself almost exclusively to the ill-ventilated and filthy parts of the town.*" Scarlatina also prevailed in the adjoining districts, viz., Ennistimon and Newmarket. The majority of the deaths in the Clarina district (Superintendent Registrar's district of Limerick), were caused by scarlatina.

Diarrhœa was more than usually prevalent, and some cases of the ordinary autumnal cholera proved fatal; those cases which were attended with cramps, and were reported by the Registrars as closely resembling the Asiatic cholera, generally recovered. Diarrhœa caused 131 deaths in the Dublin Registration District during the quarter; of this number 55 were of infants under 1 year old, and 27 were of children between 1 and 5 years old.

The Registrar of Keady (Armagh), states that whooping-cough had attacked many persons in advanced life. "In one case, an old lady, aged 80 years, is labouring under it in a severe form."

Some very old persons died during the quarter;—for example—in the Fintona district 5 had attained the age of 80 years; a man aged 100 died in the Milltown district (Mullingar union), the Registrar states that "he could read without glasses up to the day of his death." Of those who died in the Moyne district (Thurles union), 2 were upwards of 90, 5 over 80, and 3, 70 years and upwards. In the Clonmoyle district (Macroom union), a widow had attained the age of 100, and a farmer 102 years. In the Loughrea district 4 of those who died were upwards of 80 years old; and in the Whitechurch district (Dungarvan union), there died a centenarian.

Some of the Registrars refer with satisfaction to the improved sanitary condition of their districts; *but very many complain loudly of their filthy and utterly neglected state.*

The Weather.—The following meteorological observations, taken at the Ordnance Survey Office, Phœnix Park, Dublin, during the third quarter of the

year 1865, have been obligingly furnished by Captain Wilkinson, R.E., by direction of the Superintendent of the Ordnance Survey.

The mean height of the barometer during the quarter was 29·820 inches (in the corresponding period of last year it was 29·804 inches); the highest reading (30·487 inches) was on the 24th September, at 3·30 P.M., wind E.; and the lowest (29·187 inches) was on the 11th August, at 9·30 A.M., wind W.S.W.

The mean temperature of the air during the quarter ended 30th September last was 60·8°, which is 3° higher than that of the corresponding part of last year (57·8°), and higher than that of the third quarter of any year since 1835, in which year it reached 61·2°. The maximum registered by the thermometer (81·6°) occurred on the 15th September, and the minimum (36·5°) on the 22nd of same month.

The rain-fall during the quarter measured 6·318 inches: it was only 4·137 inches in the corresponding part of last year. In the half-year ended 30th September, the rain-fall amounted to 12·134 inches; in the corresponding period of 1864 it was only 8·220 inches. The greatest monthly rain-fall during last quarter was in August, when 4·209 inches were registered.

The wind blew on 26 days from S.W., on 27 days from W., and on 15 days from E., at 9·30 A.M. On 3 days in September it was calm at that hour.

Meteorological Observations taken at the Ordnance Survey Office, Phœnix Park, Dublin.

Months.	Barometer.			Thermometer.			Rain-fall.
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	
	Inches.	Inches.	Inches.	°	°	°	Inches.
July, 1864	30·097	29·304	29·796	80·9	40·5	60·6	·964
,, '65	30·237	29·411	29·741	79·7	42·8	61·4	2·006
Aug., 1864	30·371	29·383	29·936	81·4	33·0	57·1	1·301
,, '65	30·191	29·187	29·681	77·8	40·0	59·9	4·209
Sept., 1864	30·240	29·081	29·679	71·2	37·4	55·8	1·872
,, '65	30·487	29·579	30·039	81·6	36·5	61·1	·103
							Total
Mean of 3rd quarter, 1864	30·236	29·256	29·804	77·8	37·0	57·8	4·137
,, '65	30·305	29·392	29·820	79·7	39·8	60·8	6·318

Months.	Direction of the Wind at 9·30 A.M. — Number of Days on which the Wind blew from the								Calm, at 9·30 A.M.
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
July, 1864	2	7	1	—	3	6	10	2	—
,, '65	—	—	2	3	5	7	10	4	—
Aug., 1864	4	3	7	—	2	6	6	3	—
,, '65	3	—	6	—	1	7	11	3	—
Sept., 1864	1	1	2	1	1	15	8	1	—
,, '65	—	—	7	1	1	12	6	—	3
Total of 3rd quarter, 1864	7	11	10	1	6	27	24	6	—
,, '65	3	—	15	4	7	26	27	7	3

Marriages.—The eastern division was that in which the largest number of marriages in proportion to its population was *registered* during the quarter ending 30th June last; the number registered amounted to 1,176, equal to an annual ratio of 1 in 176; the number *registered* in the north-eastern division during the quarter was 1,584, affording a ratio of 1 in 177 of its population. The number of marriages *registered* in the western division amounted to 443, affording a ratio of only 1 in 464 of the inhabitants, whereas the number registered during the quarter ending 31st March, yielded a ratio of 1 in 88.

The following Statement shows the Order in which the Eight Divisions stand with Regard to the Number of Marriages in Proportion to the Population. (*Quarter ending 30th June*, 1865.)

Divisions.	Ratio.	Divisions.	Ratio.
1. Eastern	1 in 176	5. North-Western	1 in 320
2. North-Eastern	„ 177	6. North Midland	„ 337
3 South-Eastern	„ 265	7. South Midland	„ 339
4. South-Western	„ 293	8. Western	„ 464

Births.—The north-eastern division afforded the highest birth-rate for the quarter, the ratio being 1 in 38; the ratio in this division for the corresponding quarter of last year was 1 in 40.

The ratio in the eastern division for the third quarter of 1864, was 1 in 39; in the quarter just terminated it was 1 in 41. The north-western division increased its birth-rate from 1 in 49, for the quarter ending 30th September, 1864, to 1 in 47 for the corresponding quarter of the present year; and the western division from 1 in 43 to 1 in 41. The birth-rate in the north midland and south midland divisions was the same for both quarters in each, viz., 1 in 46 and 1 in 48 respectively.

The Numerical Order of the Eight Divisions as regards the Annual Rate represented by the Number of Births Registered during the Third Quarter of 1864 *and* 1865, *is shown in the following Statement.*

Divisions.	Quarter ending 30th Sept., 1864. Ratio.	Divisions.	Quarter ending 30th Sept., 1865. Ratio.
1. Eastern	1 in 39	North-Eastern	1 in 38
2. North-Eastern	„ 40	Western	„ 41
3. South-Western	„ 42	Eastern	„ 41
4. Western	„ 43	South-Western	„ 43
5. South-Eastern	„ 44	South-Eastern	„ 46
6. North Midland	„ 46	North Midland	„ 46
7. South Midland	„ 48	North-Western	„ 47
8. North-Western	„ 49	South Midland	„ 48

The eastern division, which was first in numerical order in the third quarter of 1864, holds only the third place with regard to birth-rate in the past quarter; the south-eastern and north midland held, respectively, fifth and sixth places in both periods; and the south midland and north-western, which were seventh and eighth for the third quarter of 1864, reversed their order for the past quarter.

Deaths.—The annual rate of mortality shown by the number of deaths *registered* in the eastern division during the quarter, was 1 in 60, which was the highest ratio afforded by any of the eight divisions; the deaths *registered* in the western division represent an annual ratio of only 1 in 96 of the population for the past quarter, and represented only 1 in 100 for the corresponding quarter of last year. The death-rate in the south midland division, was 1 in 74 for the third quarter of 1864, against 1 in 84 for the last quarter; in the south-western 1 in 73 against 1 in 80; in the north-western, 1 in 82 against 1 in 89; and in the south-eastern, 1 in 67 against 1 in 73.

The following Statement shows the Eight Divisions, Arranged according to the Annual Rate of Mortality afforded by the Number of Deaths Registered during the Third Quarter of 1864 *and* 1865.

Divisions.	Quarter ending 30th Sept., 1864. Ratio.	Divisions.	Quarter ending 30th Sept., 1865 Ratio.
1. Eastern	1 in 64	Eastern	1 in 60
2. South-Eastern	,, 67	North-Eastern	,, 68
3. North-Eastern	,, 69	South-Eastern	,, 73
4. South-Western	,, 73	South-Western	,, 80
5. South Midland	,, 74	South Midland	,, 84
6. North-Western	,, 82	North-Western	,, 89
7. North Midland	,, 92	North Midland	,, 92
8. Western	,, 100	Western	,, 96

With the exception of the north-eastern and south-eastern, which exchanged places, the divisions range in the same numerical order in both quarters.

Divisions.	Area in Statute Acres.	Population in 1861.	June Quarter, 1865. — Marriages.	September Quarter, 1865. Births.	Deaths.
I. North-Eastern	2,328,305	1,124,041	1,584	7,491	4,103
II. North-Western	2,392,501	574,745	449	3,073	1,615
III. Eastern	1,993,016	829,569	1,176	5,057	3,462
IV. North Midland	2,019,408	575,289	427	3,119	1,570
V. South Midland	2,361,709	515,272	380	2,671	1,538
VI. Western	4,088,459	822,878	443	5,053	2,154
VII. South-Eastern	1,826,172	500,957	473	2,736	1,722
VIII. South-Western	3,313,071	855,813	729	4,958	2,690
Total of Ireland	20,322,641	5,798,967	5,661	34,158	18,854

No. IV.—GREAT BRITAIN AND IRELAND.

SUMMARY *of* MARRIAGES, *in the Quarter ended 30th June,* 1865; *and* BIRTHS *and* DEATHS, *in the Quarter ended 30th September,* 1865.

COUNTRIES.	AREA in Statute Acres.	POPULATION, 1861. (*Persons.*)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
England and Wales	37,324,883	20,066,224	45,772	181,642	113,404
Scotland	19,639,377	3,062,294	5,698	27,320	15,907
Ireland	20,322,641	5,798,967	5,661	34,158	18,854
GREAT BRITAIN AND IRELAND	77,286,901	28,927,485	57,131	243,120	148,165

Trade of United Kingdom, 1865-64-63.—*Distribution of* Exports *from United King according to the Declared Real Value of the Exports; and the Computed Real Value (Ex- of* Imports *at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (*excluding Gold and Silver*), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Six Months.					
	1865.		1864.		1863.	
	Imports from	*Exports to*	Imports from	*Exports to*	Imports from	E
I.—Foreign Countries:	£	£	£	£	£	
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	5,719,	2,102,	6,089,	2,317,	5,146,	
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	14,028,	12,007,	13,268,	11,343,	11,544,	9
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	16,037,	7,189,	17,091,	7,047,	14,564,	7
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,950,	3,719,	1,715,	3,928,	1,914,	3
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	11,470,	5,627,	13,633,	7,026,	10,249,	4
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	146,	97,	160,	79,	197,	
Western Africa	427,	280,	372,	242,	561,	
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Mooria Islands	62,	35,	28,	24,	26,	
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	836,	996,	358,	961,	843,	
South Sea Islands	8,	26,	—	44,	19,	
China, including Hong Kong	6,024,	3,215,	9,508,	2,471,	8,496,	1
United States of America	4,339,	6,215,	8,509,	12,027,	9,519,	7
Mexico and Central America	2,281,	1,193,	2,132,	823,	769,	1
Foreign West Indies and Hayti	2,022,	1,658,	2,582,	1,537,	2,444,	1
South America (Northern), New Granada, Venezuela, and Ecuador	795,	1,417,	872,	1,079,	370,	
,, (Pacific), Peru, Bolivia, Chili, and Patagonia	3,312,	1,604,	2,603,	1,499,	3,086,	1,
,, (Atlantic) Brazil, Uruguay, and Buenos Ayres	3,346,	4,007,	4,440,	4,029,	3,173,	2,
Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	7,	4,	25,	12,	12,	
Total.—Foreign Countries	72,809,	51,391,	83,385,	56,488,	72,932,	43,
II.—British Possessions:						
British India, Ceylon, and Singapore	11,607,	11,191,	22,837,	10,229,	16,461,	8,
Austral. Cols.—New South Wales and Victoria	3,640,	4,407,	2,580,	3,602,	2,285,	3,
,, ,, So. Aus., W. Aus., Tasm., and N. Zea.	1,179,	1,918,	1,170,	1,522,	1,128,	1,
British North America	869,	1,705,	1,251,	2,385,	923,	1,
,, W. Indies with Btsh. Guiana & Honduras	3,887,	1,493,	5,306,	1,853,	3,550,	1,
Cape and Natal	975,	1,097,	814,	921,	835,	
Brt. W. Co. of Af., Ascension and St. Helena	227,	204,	116,	142,	57,	
Mauritius	630,	322,	960,	338,	1,250,	
Channel Islands	194,	401,	388,	567,	300,	
Total.—British Possessions	23,208,	22,738,	35,423,	21,559,	26,789,	18,
General Total.....£	96,017,	74,129,	118,807,	78,047,	99,721,	62,

IMPORTS. — (United Kingdom.) — First Eight Months (*January — August*), 1865-64-63-62-61.—*Computed Real Value* (*Ex-duty*), *at Port of Entry* (*and therefore including Freight and Importer's Profit*), *of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Eight Months.) [000's omitted.] Foreign Articles Imported.		1865.	1864.	1863.	1862.	1861.
		£	£	£	£	£
Raw Matls.—*Textile.*	Cotton Wool	29,944,	50,504,	26,862,	11,655,	30,809,
	Wool (Sheep's)..	10,388,	10,789,	7,921,	7,333,	6,455,
	Silk	9,541,	7,434,	9,502,	9,764,	5,428,
	Flax	3,048,	3,856,	2,262,	2,664,	1,474,
	Hemp	1,546,	2,934,	1,796,	1,336,	909,
	Indigo	1,757,	1,777,	1,926,	2,151,	1,993,
		56,224,	77,294,	50,269,	34,903,	47,068,
,, ,,	*Various.* Hides	1,634,	1,604,	1,868,	1,681,	1,404,
	Oils	2,206,	1,849,	2,512,	2,164,	1,937,
	Metals	2,724,	2,828,	2,345,	2,807,	2,106,
	Tallow	851,	711,	853,	995,	1,174,
	Timber.....	6,213,	5,523,	5,669,	4,908,	5,214,
		13,628,	12,515,	13,247,	12,555,	11,835,
,, ,,	*Agricltl.* Guano	1,686,	756,	2,022,	518,	1,395,
	Seeds	2,066,	2,138,	1,880,	1,413,	1,679,
		3,752,	2,894,	3,902,	1,931,	3,074,
Tropical,&c.,Produce.	Tea	5,287,	5,435,	6,670,	5,652,	4,219,
	Coffee	2,566,	2,254,	2,557,	2,379,	1,491,
	Sugar & Molasses	8,341,	11,336,	9,707,	8,892,	9,487,
	Tobacco	1,514,	1,390,	1,059,	673,	713,
	Rice.....	357,	588,	772,	1,266,	1,024,
	Fruits	201,	115,	153,	185,	354,
	Wines	2,456,	3,731,	2,874,	2,468,	2,829,
	Spirits	1,011,	1,544,	1,207,	1,078,	1,084,
		21,733,	26,393,	24,999,	22,593,	21,201,
Food	Grain and Meal..	11,168,	12,601,	17,605,	23,233,	24,693,
	Provisions	6,061,	5,753,	5,230,	5,090,	4,404,
		17,229,	18,354,	22,835,	28,323,	29,097,
Remainder of Enumerated Articles		3,104,	3,562,	2,806,	2,379,	2,312,
Total Enumerated Imports....		115,670,	141,012,	118,058,	102,684,	114,588,
Add for Unenumerated Imports (say)		28,917,	35,253,	29,514,	25,671,	28,647,
Total Imports.....		144,587,	176,265,	147,572,	128,355,	143,235,

EXPORTS.—(United Kingdom.)—First Nine Months (*January—September*), 1865-64-63-62-61.—*Declared Real Value, at Port of Shipment, of Articles of* British *and* Irish *Produce and Manufactures Exported from United Kingdom.*

(First Nine Months.) [000's omitted.] British Produce, &c., Exported.		1865.	1864.	1863.	1862.	1861.
		£	£	£	£	£
Manfrs.—*Textile.*	Cotton Manufactures..	33,628,	35,648,	27,192,	24,769,	28,683,
	,, Yarn.....	7,311,	7,278,	5,463,	5,297,	7,137,
	Woollen Manufactures	14,484,	14,915,	10,973,	9,698,	8,009,
	,, Yarn	3,984,	4,214,	3,702,	2,753,	2,656,
	Silk Manufactures	1,445,	1,605,	1,503,	1,547,	1,593,
	,, Yarn.....	214,	199,	215,	254,	214,
	Linen Manufactures....	6,464,	6,123,	4,555,	3,666,	2,942,
	,, Yarn.....	1,806,	2,387,	1,775,	1,353,	1,127,
		69,336,	72,369,	55,378,	49,337,	52,361,
,, *Sewed.*	Apparel	1,831,	1,801,	1,935,	1,609,	1,462,
	Haberdy. and Mllnry.	3,644,	3,793,	3,131,	2,689,	2,630,
		5,475,	5,594,	5,066,	4,298,	4,092,
Metals	Hardware.....	3,138,	3,082,	2,669,	2,391,	2,496,
	Machinery	3,862,	3,363,	3,031,	2,951,	2,120,
	Iron	9,666,	10,393,	9,676,	8,364,	7,909,
	Copper and Brass.....	2,389,	2,677,	3,072,	2,141,	1,743,
	Lead and Tin	2,058,	2,241,	2,138,	2,130,	1,359,
	Coals and Culm	3,306,	3,100,	2,768,	2,892,	2,745,
		24,419,	24,856,	23,354,	20,869,	19,372,
Ceramic Manufcts.	Earthenware and Glass	1,612,	1,620,	1,537,	1,359,	1,292,
Indigenous Mnfrs.	Beer and Ale	1,590,	1,283,	1,285,	1,124,	1,105,
	Butter	216,	234,	362,	262,	379,
	Cheese	74,	113,	106,	87,	95,
	Candles	77,	100,	156,	169,	215,
	Salt	194,	225,	235,	248,	297,
	Spirits	205,	447,	348,	368,	332,
	Soda.....	804,	686,	666,	682,	436,
		3,160,	3,088,	3,159,	2,940,	2,859,
Various Manufcts.	Books, Printed.....	359,	327,	323,	296,	330,
	Furniture.....	220,	185,	216,	183,	179,
	Leather Manufactures	1,834,	1,756,	1,674,	1,859,	1,545,
	Soap.....	133,	178,	193,	174,	170,
	Plate and Watches	304,	302,	344,	353,	331,
	Stationery..... ..	291,	253,	246,	199,	494,
		3,141,	3,001,	2,996,	3,064,	3,049,
Remainder of Enumerated Articles		7,085,	7,238,	6,404,	6,181,	3,309,
Unenumerated Articles		5,490,	5,638,	6,403,	5,624,	7,461,
Total Exports		119,717,	123,404,	104,296,	93,672,	93,795,

SHIPPING. — FOREIGN TRADE. — (United Kingdom.) — First Nine Months (*January — September*), 1865-64-63-62. — *Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.*

(First Nine Months.)	1865.			1864.		1863.		1862.	
ENTERED:—	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
Vessels belonging to—	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	379	124,	327	536	182,	301	91,	323	95,
Sweden	798	140,	175	1,008	156,	803	126,	714	117,
Norway	2,751	632,	229	3,017	631,	2,632	577,	2,360	483,
Denmark	1,652	169,	102	2,129	207,	2,305	218,	1,915	184,
Prussia and Ger. Sts.	2,817	645,	229	1,529	395,	2,992	716,	2,751	669,
Holland and Belgium	1,550	211,	136	1,380	193,	1,320	188,	1,279	177,
France	2,207	193,	87	1,784	143,	1,982	162,	1,415	118,
Spain and Portugal	325	102,	314	344	103,	284	87,	295	87,
Italy & other Eupn. Sts.	815	233,	286	608	171,	703	200,	611	172,
United States	229	248,	1,083	349	383,	563	566,	975	848,
All other States	21	6,	286	13	5,	11	3,	77	21,
	13,544	2,703,	200	12,697	2,569,	13,896	2,936,	12,715	2,973,
United Kingdm. & Depds.	18,474	5,889,	319	18,407	5,679,	17,139	5,209,	15,840	4,700,
Totals Entered	32,018	8,592,	268	31,104	8,248,	31,035	8,145,	28,555	7,673,
CLEARED:—									
Russia	323	112,	317	425	162,	291	86,	308	91,
Sweden	681	111,	163	885	134,	789	121,	712	116,
Norway	1,444	274,	190	1,818	318,	1,451	252,	1,535	262,
Denmark	1,807	185,	102	2,166	209,	2,600	247,	2,347	225,
Prussia and Ger. Sts.	3,932	786,	200	2,298	490,	4,179	829,	4,122	792,
Holland and Belgium	1,765	270,	153	1,385	214,	1,438	220,	1,743	257,
France	3,069	311,	101	3,333	330,	3,438	326,	3,768	363,
Spain and Portugal	329	100,	304	330	99,	290	94,	300	93,
Italy & other Eupn. Sts.	968	307,	317	854	256,	713	214,	622	80,
United States	258	261,	1,010	326	353,	515	531,	897	795,
All other States	31	7,	226	23	8,	19	6,	111	31,
	14,607	2,724,	186	13,843	2,573,	15,723	2,926,	16,465	3,205,
United Kingdm. & Depds.	22,198	6,861,	309	22,250	6,657,	21,707	6,083,	21,434	5,759,
Totals Cleared	36,805	9,585,	260	36,093	9,230,	37,430	9,009,	37,899	8,964,

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—*Computed Real Value for the* First Nine Months (*January—September*), 1865-64-63.

[000's omitted.]

(First Nine Months.)	1865.		1864.		1863.	
	Gold.	*Silver.*	Gold.	*Silver.*	Gold.	*Silver.*
Imported from:—	£	£	£	£	£	£
Australia	2,155,	—	2,422,	—	4,540,	—
So. Amca. and W. Indies	2,041,	3,711,	4,183,	5,779,	3,136,	5,095,
United States and Cal.	3,258,	119,	5,168,	101,	5,149,	616,
	7,454,	3,830,	11,773,	5,880,	12,825,	5,711,
France	290,	658,	118,	897,	185,	690,
Hanse Towns, Holl. & Belg.	122,	83,	210,	2,062,	309,	1,211,
Prtgl., Spain, and Gbrltr.	668,	80,	114,	68,	10,	66,
Mlta., Trky., and Egypt	281,	—	35,	1,	114,	3,
China	—	—	—	—	—	—
West Coast of Africa	79,	18,	68,	16,	47,	3,
All other Countries	749,	109,	263,	133,	984,	118,
Totals Imported	9,643,	4,778,	12,581,	9,057,	14,474,	7,802,
Exported to:—						
France	2,503,	586,	5,425,	1,935,	2,293,	833,
Hanse Towns, Holl. & Belg.	269,	1,956,	78,	635,	1,023,	703,
Prtgl., Spain, and Gbrltr.	1,485,	—	1,566,	29,	1,574,	3,
	4,257,	2,542,	7,069,	2,599,	4,890,	1,539,
Ind. and China (viâ Egypt)	275,	1,724,	1,638,	5,188,	1,608	6161,
Danish West Indies	—	—	—	—	—	—
United States	20,	—	183,	5,	35,	10,
South Africa	19,	—	111,	—	—	5,
Mauritius	—	—	—	—	—	—
Brazil	465,	80,	916,	115,	1,234,	50,
All other Countries	446,	78,	375,	206,	3,213,	119,
Totals Exported	5,482,	4,424,	10,294,	8,113,	10,980,	7,884,
Excess of *Imports*	4,161,	354,	2,289,	944,	3,493,	—
,, Exports	—	—	—	—	—	82,

REVENUE.—(UNITED KINGDOM.)—30TH SEPT., 1865-64-63-62.

Net Produce in YEARS *and* QUARTERS *ended* 30TH SEPT., 1865-64-63-62.

[000's omitted.]

QUARTERS, ended 30th Sept.	1865.	1864.	1865.		Corresponding Quarters.	
			Less.	More.	1863.	1862.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	5,289,	5,624,	,335,	—	5,872,	6,201,
Excise	4,332,	4,352,	20,	—	3,922,	3,604,
Stamps	2,272,	2,267,	—	5,	2,191,	2,180,
Taxes	242,	168,	—	74,	176,	166,
Post Office	1,145,	1,045,	—	100,	905,	895,
	13,280,	13,456,	,355,	179,	13,066,	13,046,
Property Tax	815,	782,	—	33,	866,	974,
	14,095,	14,238,	,355,	212,	13,932,	14,020,
Crown Lands	70,	69,	—	1,	68,	67,
Miscellaneous	297,	485,	,188,	—	411,	513,
Totals	14,462,	14,792,	,543,	213,	14,411,	14,600,
			NET DECR. £330,097			

YEARS, ended 30th Sept.	1865.	1864.	1865.		Corresponding Years.	
			Less.	More.	1863.	1862.
	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
Customs	21,969,	22,573,	,604,	—	23,771,	23,863,
Excise	19,539,	19,096,	—	,443,	16,992,	17,430,
Stamps	9,486,	9,538,	52,	—	9,146,	8,824,
Taxes	3,341,	3,252,	—	89,	3,193,	3,160,
Post Office	4,210,	3,960,	—	,250,	3,760,	3,560,
	58,545,	58,419,	,656,	782,	56,862,	56,837,
Property Tax	7,732,	8,551,	,819,	—	10,605,	10,532,
	66,277,	66,970,	1,475,	,782,	67,467,	67,367,
Crown Lands	312,	307,	—	5,	301,	296,
Miscellaneous	2,669,	3,097,	427,	—	2,726,	2,019,
Totals	69,258,	70,374,	1,902,	,787,	70,494,	69,684,
			NET DECR. £1,115,285			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH SEPT., 1865:—
APPLICATION.

An Account showing the REVENUE *and other* RECEIPTS *of the* QUARTER *ended 30th September*, 1865; *the* APPLICATION *of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.*

Received:—

		£
Surplus Balance beyond the Charge of the *Consolidated Fund* for the Quarter ended 30th June, 1865, viz.:—		
Great Britain	—	
Ireland	£826,139	826,139
Income received in the Quarter ended 30th September, 1865, as shown in Account I		14,462,392
Amount raised per Acts 26th and 27th Victoria, cap. 80, and 27th and 28th Victoria, cap. 109, on account of Fortifications, &c.		350,000
Amount received in the Quarter ended 30th September, 1865, in repayment of Advances for Public Works, &c.		412,289
		£16,050,820
Balance, being the Deficiency on 30th September, 1865, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other charges payable in the Quarter to 31st December, 1865, and for which Exchequer Bills (Deficiency) will be issued in that Quarter		3,018,224
		£19,069,044

Paid:—

		£
Amount applied out of the Income in Redemption of Deficiency Bills Issued in the Quarter to 30th September 1865, for the charge of the Consolidated Fund in Great Britain on 30th June, 1865		1,269,873
Amount applied out of the Income to *Supply Services* in the Quarter ended 30th September, 1865		9,546,156
Charge of the *Consolidated Fund* for the Quarter ended 30th September, 1865, viz.:—		
Interest of the Permanent Debt	£5,441,967	
Terminable Debt	916,271	
Interest of Exchequer Bills	74,548	
„ Deficiency „	—	
The Civil List	101,478	
Other Charges on Consolidated Fund	561,805	
Advances for Public Works, &c.	313,152	
Sinking Fund	624,212	
		8,033,433
Surplus Balance in Ireland beyond the Charge of the Consolidated Fund in Ireland for the Quarter ended 30th September, 1865		220,582
		£19,069,044

BRITISH CORN.—*Gazette Average Prices* (England and Wales), *Third Quarter of* 1865.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1865.	Weekly Average. (Per Impl. Quarter.) Wheat.	Barley.	Oats.
	s. *d.*	*s.* *d.*	*s.* *d.*
July 1	41 6	27 6	23 2
„ 8	42 5	28 4	22 7
„ 15	43 1	27 3	22 5
„ 22	43 –	28 3	23 2
„ 29	42 10	28 6	24 –
Average for July	42 6	27 11	23 1
August 5	42 6	27 5	24 –
„ 12	42 –	27 10	23 5
„ 19	43 1	27 11	23 10
„ 26	45 4	30 –	24 –
Average for August	43 2	28 3	23 9
Sept. 2	46 7	31 2	23 7
„ 9	46 –	31 2	23 1
„ 16	44 7	30 10	20 11
„ 23	42 –	30 2	20 10
„ 30	40 10	29 11	20 2
Average for September	44 –	30 7	21 8
Average for the quarter	43 3	29 –	22 9

RAILWAYS.—Prices, *July—Sept.;—and* Traffic, *Jan.—Sept.*, 1865.

Total Capital Expended Mlns.	Railway.	For the (£100). Price on 1st Sep.	1st Aug.	1st July.	Miles Open. '65.	'64.	Total Traffic first 39 Weeks. (000's omitted.) '65.	'64.	Traffic pr. Mile pr. Wk. 39 Weeks. '65.	'64.	Dividends per Cent. for Half Years. 30 June, '65.	31 Dec. '64.	30 Jun. '64.
£					No.	No.	£	£	£	£	*s.* *d.*	*s.* *d.*	*s.* *d.*
52,4	Lond. & N. Westn.	124¼	122	124	1,274	1,271	4,364,	4,172,	95	92	60 –	70 –	57 6
45,6	Great Western	67¼	65¼	69½	1,280	1,268	2,766,	2,705,	57	58	20 –	32 6	30 –
17,9	„ Northern....	132	131½	132	404	365	1,401,	1,300,	94	99	55 –	87 6	55 –
22,9	„ Eastern	47½	48½	49	721	663	1,278,	1,226,	48	52	10 –	25 –	12 6
13,8	Brighton	105	108	108	272	268	831,	768,	92	83	50 –	60 –	50 –
18,0	South-Eastern	82	83	85	315	306	978,	927,	86	85	25 –	57 6	42 6
15,8	„ Western	97½	100½	99½	490	463	977,	939,	58	59	45 –	55 –	45 –
186,7		93½	94	95¼	4,756	4,604	12,595,	12,037,	76	75	38 –	55 4	41 9
24,7	Midland.....	128¾	131¼	135	677	641	1,858,	1,797,	76	77	65 –	77 –	70 –
20,7	Lancsh. and York.	120	119¾	122¼	403	403	1,597,	1,548,	108	99	55 –	60 –	57 6
13,6	Sheffield and Man.	58	54	62	246	246	729,	699,	79	78	10 –	25 –	27 6
32,2	North-Eastern	110¾	111	112½	1,199	1,160	2,465,	2,368,	61	59	25 –	62 –	55 –
91,3		104¼	104	107¾	2,525	2,450	6,649,	6,412,	81	76	38 9	56 1	52 6
13,4	Caledonian	135	133	133½	408	408	871,	830,	73	68	67 6	72 6	65 –
5,7	Gt. S. & Wn. Irlnd.	88	89	88	387	387	344,	332,	26	22	45 –	45 –	45 –
297,2	*Gen. aver.*	99¾	99¾	101½	8,076	7,849	20,459,	19,611,	73	71	40 11	56 1	47 1

Consols.—Money Prices, 1*st Sept.*, 89¾ to ⅞ (de.).—1*st Aug.*, 90⅛ to ¼ (de.).—1*st July*, 90 to ⅛ (de.).
Exchequer Bills.—1*st Sept.* 3*s.* dis. to 1*s.* pm.—1*st Aug.*, 3*s.* pm. to par—1*st July*, par to 4*s.* pm.

BANK OF ENGLAND.—Weekly Return.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the Third Quarter (*July—September*) *of* 1865.

[0,000's omitted.]

1	2	3	4	5	6	7
Issue Department.					Collateral Columns.	
Liabilities.	Dates.	Assets.				
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1865. Per ann.
29,77	July 5	11,01	3,63	15,12	22,22	16 June 3 p. ct.
29,21	,, 12	11,01	3,63	14,56	22,39	
28,80	,, 19	11,01	3,63	14,15	22,24	
28,25	,, 26	11,01	3,63	13,60	22,07	
28,25	Aug. 4	11,01	3,63	13,60	22,64	4 Aug. 4 ,,
27,99	,, 11	11,01	3,63	13,34	22,02	
27,89	,, 18	11,01	3,63	13,24	21,97	
27,92	,, 25	11,01	3,63	13,27	21,78	
28,21	Sept. 1	11,01	3,63	13,56	21,60	
28,07	,, 8	11,01	3,63	13,42	21,70	
27,95	,, 15	11,01	3,63	13,33	21,40	
27,99	,, 22	11,01	3,63	13,34	21,32	
27,78	,, 29	11,01	3,63	13,13	21,51	29 Sept. 4½ ,,

Banking Department.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Dates.	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.		(Wdnsdys.)	Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14,55	3,29	9,35	14,44	,50	July 5	10,40	23,23	7,55	,95	42,13
14,55	3,43	4,59	16,23	,55	,, 12	10,40	21,16	6,82	,97	39,35
14,55	3,46	4,93	14,89	,55	,, 19	10,40	20,50	6,56	,93	38,39
14,55	3,48	4,77	15,94	,52	,, 26	10,40	21,78	6,18	,90	39,26
14,55	3,51	5,21	14,68	,56	Aug. 4	10,38	21,67	561	,85	38,51
14,55	3,52	5,26	14,69	,55	,, 11	10,38	21,34	5,97	,88	38,58
14,55	3,54	5,33	14,96	,54	,, 18	10,38	21,69	5,92	,94	38,93
14,55	3,51	5,58	14,71	,53	,, 29	10,38	21,41	6,14	,95	38,89
14,55	3,51	6,09	14,49	,53	Sept. 1	10,38	21,26	6,62	,92	39,18
14,55	3,74	5,98	14,21	,53	,, 8	10,38	21,36	6,37	,90	39,02
14,55	3,75	6,32	13,86	,55	,, 15	10,38	21,24	6,55	,85	39,04
14,55	3,80	6,82	13,57	,52	,, 22	10,38	21,33	6,67	,88	39,27
14,55	3,81	7,33	13,79	,53	,, 29	10,38	22,52	6,28	,83	40,01

CIRCULATION.—Country Banks.

Average Amount of Promissory Notes in Circulation in England *and* Wales *on Saturday, in each Week during the* Third Quarter (*July—Sept.*) *of* 1865; *and in* Scotland *and* Ireland, *at the Three Dates, as under.*

England and Wales.				Scotland.				Ireland.		
Dates.	Private Banks. (Fixed Issues, 4,19).	Joint Stock Banks. (Fixed Issues, 3,23).	Total. (Fixed Issues, 7,41).	Four Weeks, ended	£5 and upwards.	Under £5.	Total. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	Total. (Fixed Issues, 6,35).
1865.	£ Mlns.	£ Mlns.	£ Mlns.	1865.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
July 1	2,86	2,74	5,59							
,, 8	2,91	2,78	5,69							
,, 15	2,89	2,76	5,65							
,, 22	2,86	2,75	5,61							
,, 29	2,84	2,74	3,58	July 22	1,58	2,79	4,37	2,96	2,76	5,72
Aug. 5	2,86	2,74	5,60							
,, 12	2,84	2,75	5,59							
,, 19	2,82	2,75	5,58							
,, 26	2,82	2,74	5,57	Aug. 19	1,59	2,75	4,35	2,88	2,78	5,66
Sept. 2	2,83	2,74	5,58							
,, 9	2,87	2,78	5,65							
,, 16	2,91	2,83	5,74	Sept. 16	1,50	2,80	4,30	2,96	2,98	5,94

FOREIGN EXCHANGES.—*Quotations as under,* London *on Paris, Hamburg & Calcutta; —and New York, Calcutta, Hong Kong & Sydney, on* London*—with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Paris.				Hamburg.				Calcutta.				
Dates.	London on Paris.	Bullion as arbitrated.		Prem. or Dis. on Gold per mille.	London on Hambg.	Bullion as arbitrated.		New York.	India Council	At Calcutta on London.	Hong Kong.	Sydney.	Standard *Silver* in bars in London.
	3 m. d.	Agnst. Engd.	For Engd.		3 m. d.	Agnst. Engd.	For Engd.	60 d. s.	60 d. s.	6 m. s.	6 m. s.	30 d. s.	pr. oz.
1865.		pr. ct.	pr. ct.			pr. ct.	pr. ct.	pr. ct.	*d.*	*d.*	*d.*	pr. ct.	*d.*
July 8 ..	25·42	·1	—	1½ pm	13·10¼	—	·3	154	23¾	24	52½	par	60½
,, 22 ..	·40	,,	—	,,	·9¼	—	·2	152½	,, ⅞	,,	,,	,,	,, ¾
Aug. 5 ..	·45	,,	—	,,	·10½	—	·3	154¾	,, ¾	,, ½	,,	,,	,,
,, 19 ..	·47½	—	·2	,,	,, ¼	—	—	156½	,,	,,	53½	13½ pm	,,
Sept. 2 ..	,, ¾	—	,,	,,	,, ½	—	—	,,	,,	,, ¼	54	,,	,, ⅞
,, 16 ..	,,	—	·1	,,	,, ¼	—	·1	157½	,,	,,	55¼	,,	,, ¾

SHIPPING CASUALTIES: *an* APPROXIMATE RECORD, *extracted from* "LLOYD'S SECTIONS. *By* HENRY JEULA, *Member*

PART II.

TABLE IX.—*China*,

1864. — To.	Abandoned. — Ships.	Anchors and Chains. — Ships.	Burnt or on Fire. — Ships.	Captured. — Ships.	Collision. — Ships.	Condemned. — Ships.	Leaky. — Ships.
January	—	1	1	—	—	—	—
February	1	—	—	—	—	—	1
March	—	—	1	—	2	—	—
April	—	—	—	1	—	—	—
May	—	—	2	—	—	—	2
June	—	—	—	—	—	—	—
July	—	—	1	—	1	1	1
August	—	—	—	—	2	—	2
September	—	—	—	—	—	—	2
October	—	1	—	—	—	1	1
November	—	—	—	—	1	—	1
December	2	—	1	—	1	—	—
Total	3	2	6	1	7	2	10

From.	Abandoned. — Ships.	Burnt or on Fire. — Ships.	Captured. — Ships.	Cargo Damaged. — Ships.	Collision. — Ships.	Condemned. — Ships.	Jettison. — Ships.	Leaky. — Ships.
January	—	1	—	—	3	—	—	3
February	1	—	—	—	—	—	—	1
March	—	—	—	—	—	—	—	1
April	—	—	1	—	1	—	—	2
May	1	—	—	—	—	—	—	1
June	—	—	—	—	—	—	—	2
July	—	—	—	—	—	—	—	—
August	—	—	—	—	—	—	—	2
September	—	—	—	1	—	—	—	2
October	—	—	—	—	—	1	—	—
November	—	—	—	—	—	—	1	4
December	—	—	—	—	—	—	—	2
Total	2	1	1	1	4	1	1	20

* Continued

List" *for the* Year 1864, Tabulated *and* Arranged *in* Geographical *of Lloyd's*, F.R.G.S., F.S.S.*

Part II.

Oriental Archipelago, &c.

Machinery Damaged or Short of Coals.	Missing.	Ship Damaged.	Stranded.		Sunk.	Various Damage, Ship and Cargo.	Wrecked.	Total.	
Steamers.	Ships.	Ships.	Ships.	Steamers.	Ships.	Ships.	Ships.	Ships.	Steamers.
—	—	—	2	—	—	1	—	5	—
—	—	1	2	1	—	—	1	6	1
—	—	1	1	—	—	—	4	9	—
—	1	1	1	—	—	—	1	5	—
—	—	—	1	—	—	—	1	6	—
—	1	—	—	—	—	—	—	1	—
—	—	—	1	—	—	—	—	5	—
—	—	2	—	—	—	—	—	6	—
—	—	2	1	—	—	—	—	5	—
—	1	—	1	—	—	—	—	5	—
—	—	3	—	—	2	1	3	11	—
1	—	1	2	—	—	1	—	8	1
1	3	11	12	1	2	3	10	72	2

Machinery Damaged or Short of Coals.	Missing.	Ship Damaged.	Stranded.		Sunk.	Various Damage, Ship and Cargo.	Wrecked.	Total.	
Steamers.	Ships.	Ships.	Ships.	Steamers.	Ships.	Ships.	Ships.	Ships.	Steamers.
—	—	4	—	—	—	—	1	12	—
—	—	1	1	—	—	—	1	5	—
—	—	2	2	—	1	—	—	6	—
—	—	2	1	—	—	2	1	10	—
1	—	2	3	—	—	—	—	7	1
—	—	—	1	—	—	—	—	3	—
1	—	—	—	—	—	—	—	—	1
—	—	1	1	—	—	1	—	5	—
—	—	—	—	—	—	—	1	4	—
—	1	—	1	—	—	—	—	3	—
—	—	1	3	—	—	—	2	11	—
—	—	1	1	1	—	—	—	4	1
2	1	14	14	1	1	3	6	70	3

from p. 470.

TABLE X.—*Eas*

1864. To.	Aban-doned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Cargo Damaged. Ships.	Collision. Ships.	Collision. Steamers.	Jettison. Ships.	Leaky. Ships.	Machinery Damaged or Short of Coals. Steamers.	Missing Ships.
January	1	—	2	—	1	—	1	2	—	—
February	—	1	1	—	—	—	—	1	—	—
March	—	—	1	—	1	—	—	1	—	1
April	—	—	—	—	—	—	—	1	—	—
May	—	—	1	—	2	1	—	1	—	—
June	—	—	—	—	—	—	—	2	—	—
July	—	—	—	1	—	—	—	—	1	—
August	—	—	—	2	—	—	—	2	—	—
September	—	—	—	—	1	—	1	—	—	1
October	—	13	—	—	2	—	—	—	—	1
November	—	1	—	—	1	—	—	1	—	—
December	—	—	—	—	1	—	—	3	—	—
Total	1	15	5	3	9	1	2	14	1	3

From.	Aban-doned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Cargo Da-maged. Ships.	Cargo Shifted. Ships.	Collision. Ships.	Collision. Steamers.	Con-demned. Ships.	Jettison. Ships.	Leaky. Ships.	Machinery Damaged or Short o Coals. Steamers.
January	1	—	—	—	—	1	—	1	—	—	1
February	—	—	1	—	—	2	—	—	—	4	—
March	—	—	1	—	—	1	—	—	—	1	—
April	—	—	1	1	—	2	1	—	—	2	—
May	—	—	—	—	—	1	—	1	—	5	—
June	1	—	—	—	—	—	—	—	—	3	—
July	—	—	—	—	—	—	—	—	—	1	—
August	—	—	—	1	1	3	—	—	—	12	—
September	—	1	—	—	—	—	—	—	—	6	—
October	1	2	1	—	—	1	—	2	1	8	—
November	1	—	1	1	1	2	—	—	1	3	—
December	—	2	—	—	—	—	—	—	—	5	1
Total	4	5	5	3	2	13	1	4	2	50	2

Indies, Birmah, &c.

Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Ships.	Ships.	Steamers.	Ships.	Steamers	Ships.	Steamers.	Ships.	Ships.	Steamers.	Ships.	Steamers.
—	—	—	6	—	—	—	1	—	—	14	—
—	3	—	4	—	—	—	1	1	—	12	—
—	4	—	2	—	—	—	—	1	—	11	—
—	—	—	3	—	—	—	—	1	—	5	—
—	2	1	2	—	—	—	—	—	—	8	2
—	1	—	2	—	—	—	—	1	—	6	—
—	1	—	3	—	—	—	—	—	—	5	1
—	—	1	4	—	—	—	—	—	—	8	1
1	—	—	3	1	—	—	—	2	—	9	1
—	11	2	34	7	3	—	—	9	5	73	14
—	8	2	10	3	7	1	—	1	1	29	7
1	4	—	3	—	1	—	—	—	—	13	—
2	34	6	76	11	11	1	2	16	6	193	26

Missing.	Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.
—	1	2	—	—	1	—	—	—	1	—	7	2
—	—	2	—	4	—	—	—	—	—	—	13	—
—	—	1	—	3	—	—	—	2	1	—	10	—
—	1	2	—	6	—	—	—	2	1	—	18	1
1	—	4	—	4	—	—	—	—	—	—	16	—
—	—	1	—	3	—	—	—	—	1	—	9	—
—	—	3	—	3	—	—	—	—	2	—	9	—
—	—	2	—	6	—	1	—	—	1	—	27	—
—	—	4	—	3	—	—	—	—	—	—	14	—
—	1	16	—	20	5	7	—	—	11	2	71	7
—	—	11	1	19	2	3	1	—	—	—	43	4
1	—	5	—	1	—	—	—	1	1	—	16	1
2	3	53	1	72	8	11	1	5	19	2	253	15

TABLE XI.—*France, Portugal, Azores*

1864. To.	Abandoned. Ships.	Anchors and Chains. Ships.	Captured. Steamers.	Cargo Damaged. Ships.	Collision. Ships.	Collision. Steamers.	Leaky. Ships.	Missing. Ships.
January	2	—	—	—	3	—	1	—
February	—	—	—	—	—	—	4	1
March	—	—	—	1	6	—	1	—
April	—	—	—	1	4	—	—	1
May	—	—	—	—	—	—	3	1
June	—	—	—	—	—	—	2	1
July	—	—	—	—	—	—	—	—
August	—	—	1	—	—	—	2	—
September	—	1	—	—	2	—	—	—
October	—	—	—	—	4	1	3	—
November	—	3	—	—	3	—	4	—
December	—	1	—	—	4	1	3	—
Total	2	5	1	2	26	2	23	4

From.	Abandoned. Ships.	Anchors and Chains. Ships.	Burnt or on Fire. Ships.	Collision. Ships.	Collision. Steamers.	Jettison. Ships.	Leaky. Ships.	Leaky. Steamers.	Machinery Damaged or Short of Coals. Steamers.
January	1	2	—	1	—	—	3	—	1
February	1	—	—	1	—	—	2	—	—
March	—	—	—	3	1	—	—	—	—
April	—	—	—	2	—	—	1	—	—
May	—	—	—	1	—	—	1	1	—
June	—	—	—	—	—	—	—	—	1
July	—	—	—	1	—	—	1	—	—
August	—	—	—	1	—	—	2	—	—
September	—	1	1	1	1	—	1	—	—
October	—	—	—	1	—	—	2	—	—
November	1	—	—	1	—	1	1	—	—
December	—	1	—	—	—	—	—	—	—
Total	3	4	1	13	2	1	14	1	2

ain, Outside the Straits, Gibraltar, &c.

Mutiny or ckness.	Ship Damaged.		Stranded.		Sunk.	Various Damage, Ship and Cargo.	Wrecked.	Total.	
Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Ships.	Ships.	Steamers.
—	3	—	2	—	2	—	3	16	—
—	5	1	3	—	2	2	1	18	1
—	2	—	14	—	—	—	—	24	—
—	1	—	2	—	—	—	—	9	—
—	2	—	1	—	—	—	—	7	—
—	1	—	2	—	—	—	1	7	—
—	—	—	2	—	1	—	—	3	—
—	—	—	2	1	1	—	2	7	2
—	—	—	2	—	1	1	—	7	—
—	3	—	1	3	1	—	2	14	4
1	8	—	8	—	5	—	2	34	—
—	9	—	3	2	—	—	2	22	3
1	34	1	42	6	13	3	13	168	10

Missing.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Steamers	Ships.	Ships.	Steamers.	Ships.	Steamers.
—	2	—	3	—	1	—	—	—	1	13	2
3	1	—	4	1	—	—	—	—	—	12	1
—	—	—	3	—	3	—	1	—	—	10	1
—	1	1	2	—	2	—	—	—	—	8	1
—	1	—	1	—	—	—	—	—	—	4	1
—	—	—	1	—	2	—	—	—	—	3	1
—	—	—	—	—	—	—	—	—	1	2	1
—	1	—	3	—	—	—	1	3	—	11	—
—	1	—	2	—	—	1	—	1	—	8	2
—	—	—	3	—	1	—	—	1	—	8	—
—	7	—	4	1	—	—	1	—	—	16	1
—	1	—	3	—	—	—	—	—	—	5	—
3	15	1	29	2	9	1	3	5	2	100	11

TABLE XII.—*Mediterran*

1864. To.	Abandoned.		Anchors and Chains.		Burnt or on Fire.		Captured.	Cargo Damaged.	Cargo Shifted.	Collision.		Condemned.	Jetti
	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Shi
January....	3	—	1	—	—	—	—	—	—	5	—	—	—
February	—	—	1	—	—	—	—	—	—	3	—	—	1
March	—	—	1	—	—	—	1	—	—	4	—	—	1
April	1	—	—	—	—	—	—	—	—	—	—	—	1
May	—	—	—	—	—	—	—	—	—	1	—	1	—
June	—	—	—	—	—	1	—	—	—	1	—	1	1
July	—	—	—	—	1	—	—	1	—	1	1	—	1
August ...	—	—	—	—	—	1	—	1	—	2	—	—	1
September	—	—	—	—	1	—	—	—	1	3	—	—	—
October	—	—	—	—	1	—	—	—	—	2	2	—	—
November	2	—	—	1	—	—	—	—	—	3	—	—	—
December	2	1	1	—	—	—	—	—	—	11	—	—	1
Total ...	8	1	4	1	3	2	1	2	1	36	3	2	7

From.	Abandoned.	Anchors and Chains.	Burnt or on Fire.		Collision.		Cargo Damaged.	Cargo Shifted.	Jettison.		Leaky.	
	Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmr
January....	1	—	—	—	2	—	1	—	1	—	6	—
February	—	—	—	—	2	—	—	—	1	—	1	—
March	—	—	—	2	3	1	—	1	—	—	4	1
April	—	—	1	—	2	—	—	—	—	1	—	—
May	—	—	—	—	2	—	—	—	1	—	3	—
June	—	—	1	—	3	—	—	—	—	—	4	—
July	—	—	—	—	—	—	—	—	—	—	4	—
August	—	—	—	—	3	—	—	—	1	—	4	—
September	—	—	—	—	1	—	—	—	—	—	5	—
October	2	—	—	—	2	1	—	1	2	—	3	—
November	3	—	—	1	2	—	—	—	—	—	7	—
December	1	1	1	1	4	—	—	2	1	—	12	1
Total	7	1	3	4	26	2	1	4	7	1	53	2

ck Sea, Azof, &c.

Leaky.		Machinery Damaged or Short of Coals.	Missing.		Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.	Various Damage, Ship and Cargo		Wrecked	Total.	
s.	Stmrs.	Steamers.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Ships	Stmr.
	—	2	—	—	—	2	—	6	2	1	—	1	4	26	5
	—	—	—	—	—	8	—	2	1	3	1	—	1	20	1
	—	—	1	—	1	3	—	5	2	3	—	—	3	27	2
	—	—	2	—	—	2	1	1	—	2	—	—	—	9	1
	—	—	—	—	—	4	1	1	—	—	—	—	—	9	1
	—	—	—	—	—	—	—	2	—	1	—	—	—	8	1
	—	—	—	—	—	—	—	.2	1	—	—	—	—	7	2
	—	1	—	—	—	2	1	5	—	—	—	—	—	11	3
2	—	1	—	—	—	1	—	6	1	1	—	—	—	15	2
4	—	—	—	—	1	2	—	3	1	5	—	—	3	21	3
4	—	1	—	—	—	7	1	2	2	5	1	—	1	25	5
5	1	2	—	2	—	5	—	5	—	2	1	—	4	37	6
8	1	7	3	2	2	36	4	40	10	23	3	1	16	215	32

achinery amaged Short of Coals.		Missing.	Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.	Various Damage, Ship and Cargo.	Wrecked	Total.	
eamers.		Ships.	Ships.	Ships.	Steamers.	Ships	Steamers.	Ships.	Ships.	Ships.	Ships.	Steamers.
2		—	—	4	—	8	1	2	—	6	31	3
—		1	—	2	—	4	—	—	2	—	13	—
1		1	—	1	—	2	—	1	2	2	17	5
—		—	—	5	—	4	—	—	—	—	12	1
—		1	—	1	1	7	—	—	1	2	18	1
—		1	1	—	—	4	—	1	—	16	31	—
—		—	1	1	—	7	—	2	—	—	15	—
—		—	—	2	—	4	—	1	—	—	15	—
—		—	—	—	—	2	1	2	—	—	10	1
—		—	—	4	—	3	1	3	2	—	22	2
—		—	—	8	—	4	1	1	2	3	30	2
1		—	—	7	—	15	—	—	—	10	54	3
4		4	2	35	1	64	4	13	9	39	268	18

TABLE XIII.—*Pacific, West*

1864. To.	Abandoned. Ships.	Burnt or on Fire. Ships.	Captured. Ships.	Cargo Damaged. Ships.	Cargo Shifted. Ships.	Collision. Ships.	Condemned. Ships.
January	—	1	—	—	—	—	—
February	—	—	—	1	1	—	1
March	—	—	—	—	1	—	—
April	—	—	—	—	—	—	—
May	—	—	—	—	—	—	—
June	—	1	1	—	—	—	—
July	1	—	—	—	—	—	—
August	—	—	—	—	—	1	—
September	1	—	—	—	—	—	—
October	—	—	—	—	—	1	1
November	1	—	—	—	—	—	—
December	—	—	—	—	—	—	—
Total	3	2	1	1	2	2	2

From.	Burnt or on Fire. Ships.	Captured. Ships.	Collision. Ships.	Condemned. Ships.	Leaky. Ships.
January	—	—	—	—	1
February	—	—	1	—	—
March	—	—	—	—	—
April	—	1	—	—	4
May	—	2	1	—	1
June	1	—	—	1	1
July	—	—	—	—	1
August	—	—	—	—	—
September	—	—	—	—	—
October	—	—	1	1	1
November	—	—	—	—	1
December	1	—	—	—	—
Total	2	3	3	2	10

Coast of South America, &c.

Jettison. — Ships.	Leaky. — Ships.	Mutiny or Sickness. — Ships.	Ship Damaged. — Ships.	Stranded. — Ships.	Sunk. — Ships.	Various Damage, Ship and Cargo. — Ships.	Wrecked. — Ships.	Total. — Ships.
—	1	—	1	—	—	—	—	3
—	1	—	1	2	—	1	—	8
—	—	—	1	1	—	—	—	3
—	1	—	—	—	—	1	—	2
—	—	—	1	2	—	—	—	3
—	—	1	—	1	—	1	—	5
—	—	1	—	—	—	1	—	3
—	1	—	1	—	—	—	—	3
1	2	—	1	—	1	—	1	7
—	1	1	2	—	3	—	—	9
—	1	—	2	—	—	—	—	4
—	1	—	1	1	—	—	—	3
1	9	3	11	7	4	4	1	53

Ship Damaged. — Ships.	Stranded. — Ships.	Sunk. — Ships.	Various Damage, Ship and Cargo. — Ships.	Wrecked. — Ships.	Total. — Ships.
—	2	—	—	1	4
—	—	—	—	—	1
1	—	—	1	—	2
1	1	—	—	—	7
—	4	1	—	—	9
1	—	—	—	—	4
—	—	—	—	1	2
2	—	—	—	—	2
2	2	—	—	—	4
2	—	—	—	—	5
2	1	—	—	—	4
—	—	1	1	—	3
11	10	2	2	2	47

TABLE XIV.—*West Indies, Vera*

1864. To.	Abandoned. Ships.	Anchors and Chains. Ships.	Anchors and Chains. Steamers.	Burnt or on Fire. Ships.	Captured. Ships.	Captured. Stmrs.	Collison. Ships.	Collison. Stmrs.	Condemned. Ships.	Leaky. Ships.	Leaky. Stmrs.
January	—	—	—	—	1	—	2	—	—	1	—
February	1	1	—	—	—	—	—	—	1	5	—
March	1	—	—	10	2	1	6	2	1	2	—
April	—	—	—	1	—	—	1	—	—	—	—
May	1	—	—	1	—	—	—	—	1	3	—
June	—	—	—	—	—	—	—	—	—	3	—
July	—	—	—	1	—	—	—	—	—	1	—
August	—	—	1	—	—	—	3	—	—	1	1
September	—	—	1	1	—	—	—	—	—	1	—
October	—	—	—	—	—	—	1	—	—	3	—
November	—	1	—	—	—	—	—	—	—	2	1
December	1	1	—	—	—	—	8	—	—	2	—
Total	4	3	2	14	3	1	21	2	3	24	2

From.	Abandoned. Ships.	Captured. Ships.	Cargo Damaged. Ships.	Collision. Ships.	Collision. Steamers.	Condemned. Ships.	Leaky. Ships.	Missing. Ships.
January	—	—	—	2	—	—	3	—
February	—	1	—	2	—	—	1	—
March	—	—	—	1	—	1	—	—
April	—	1	—	—	—	—	1	—
May	—	—	—	—	—	1	4	1
June	—	—	1	1	—	—	1	—
July	—	—	1	—	—	—	1	—
August	—	—	—	—	—	1	—	—
September	—	—	—	—	—	1	—	—
October	—	—	1	1	1	—	—	—
November	1	—	—	2	—	1	2	—
December	—	—	—	2	—	—	4	—
Total	1	2	3	11	1	5	17	1

Cruz, Belize, Coast of Carribean, &c.

Machinery Damaged or Short of Coals.	Mutiny or Sickness.		Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Steamers.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.
1	—	—	1	1	1	—	2	—	—	1	—	9	2
—	—	—	5	—	—	—	1	1	—	3	1	17	2
—	2	—	1	1	6	3	3	1	—	2	—	36	8
—	—	—	—	—	2	1	3	—	1	2	1	10	2
—	—	—	—	—	3	—	—	—	—	2	—	11	—
1	—	—	1	—	3	—	—	—	2	3	—	12	1
—	—	—	—	—	1	—	—	—	—	—	—	3	—
—	—	—	—	—	3	1	—	—	—	—	—	7	3
—	—	1	—	1	1	—	—	—	—	6	—	9	3
—	—	—	1	—	3	—	—	—	—	1	—	9	—
3	—	—	4	1	2	1	—	—	3	—	—	12	6
2	—	—	—	—	6	—	—	—	1	—	—	19	2
7	2	1	13	4	31	6	9	2	7	20	2	154	29

Mutiny or Sickness.	Ship Damaged.	Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.	Total.	
Ships.	Ships.	Ships.	Steamers.	Ships.	Steamers.	Ships.	Ships.	Ships.	Steamers.
—	3	3	—	—	—	1	2	14	—
—	1	2	—	—	—	—	1	8	—
—	4	2	—	—	—	—	—	8	—
—	3	1	—	—	—	1	1	8	—
—	3	3	—	—	1	1	4	17	1
—	—	1	—	—	—	2	4	10	—
1	—	—	—	1	—	—	1	5	—
—	1	1	—	—	—	—	2	5	—
2	—	2	—	—	—	—	1	6	—
2	1	3	—	—	—	—	5	13	1
2	6	2	1	—	—	1	2	19	1
—	4	1	—	2	—	—	1	14	—
7	26	21	1	3	1	6	24	127	3

TABLE XV.—

1864.	Abandoned.	Anchors and Chains.	Burnt or on Fire.		Captured.	Cargo Damaged.	Cargo Shifted.	Collision.		Jettison.	Leaky.	
	Ships.	Ships.	Ships.	Stmrs.	Ships.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.
January	4	2	—	—	—	—	1	35	5	—	7	2
February....	6	15	1	2	—	1	1	26	7	—	10	—
March	3	5	3	—	—	1	—	28	2	—	9	—
April	—	—	1	—	—	—	1	12	3	—	3	—
May.....	5	—	2	—	1	—	—	13	—	—	3	—
June	—	1	1	—	—	—	—	5	5	—	3	—
July.....	1	—	1	—	—	—	—	3	2	—	6	—
August	1	1	—	—	—	2	—	16	9	—	3	1
September	—	3	—	—	—	—	—	12	5	—	7	1
October	3	2	3	—	—	—	—	17	7	—	7	—
November	3	17	2	—	—	—	1	22	12	—	16	1
December	2	10	1	—	—	—	—	24	8	1	16	—
Total	28	56	15	2	1	4	4	213	65	1	90	5

TABLE XVI.—

1864.	Abandoned.		Anchors and Chains.	Burnt or on Fire.	Captured.		Cargo Damaged.	Collision.		Condemned.	Jettison.	Leaky.	
	Ships.	Stmrs.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Ships.	Ships.	Stmrs.
January	1	—	—	—	—	—	—	1	—	2	—	2	—
February....	1	—	—	—	—	—	—	2	—	1	1	2	—
March	3	1	—	1	—	—	—	4	—	—	—	2	—
April	2	—	1	—	—	—	—	5	—	1	1	5	—
May.....	1	—	—	—	1	—	—	—	—	—	—	5	—
June	2	—	—	—	1	—	—	—	—	—	—	2	—
July.....	1	—	—	4	2	1	—	2	1	—	—	3	—
August	2	—	1	1	—	—	—	1	—	1	—	4	—
September	2	—	—	—	1	—	1	—	—	1	—	3	—
October	—	—	—	—	—	—	—	—	—	—	1	3	—
November	3	—	—	1	3	1	—	4	—	1	—	6	1
December	—	—	1	—	1	—	—	—	—	—	2	1	—
Total	18	1	3	7	9	2	1	19	1	7	5	38	1

oasters.

Machinery Damaged or Short of Coals.	Missing.	Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Steamers.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.
2	—	1	14	—	45	3	21	—	—	8	1	138	13
—	4	—	20	1	44	6	18	2	—	11	—	157	18
—	—	—	13	—	36	1	15	2	1	11	—	125	5
—	—	—	4	—	15	1	6	1	—	3	—	45	5
—	—	—	—	3	35	5	2	—	—	3	—	64	8
—	—	—	1	1	8	2	8	1	—	1	—	28	9
—	—	—	2	—	17	—	8	—	—	4	—	42	2
—	—	—	8	1	27	1	8	—	1	1	—	68	12
—	—	—	3	—	27	3	12	1	—	5	—	69	10
—	—	—	9	1	57	2	22	—	—	1	—	131	10
—	—	—	25	1	63	3	23	3	1	25	2	198	22
1	1	—	13	3	33	—	18	2	—	4	—	123	14
3	5	1	112	11	407	27	161	12	3	77	3	1,188	128

ross Voyages.

Machinery Damaged or Short of Coals.	Missing.	Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Steamers.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.
—	—	—	7	—	15	—	—	—	—	9	—	37	—
1	—	—	9	—	2	—	1	—	—	4	—	23	1
—	—	—	2	—	6	—	2	—	—	3	—	23	1
—	—	—	7	—	9	1	3	—	—	2	1	36	2
—	—	1	4	—	7	—	—	—	2	4	—	25	—
—	—	—	2	—	1	—	1	—	—	—	—	9	—
—	—	2	1	—	5	—	2	—	1	3	—	26	2
1	—	1	2	1	6	1	—	1	—	3	1	22	5
—	—	—	5	—	6	4	—	—	1	6	—	26	4
—	—	—	5	—	11	2	5	—	1	2	—	28	2
1	1	—	9	—	8	—	1	—	—	3	—	40	3
—	—	—	4	—	4	—	2	—	—	3	—	18	—
3	1	4	57	1	80	8	17	1	5	42	2	313	20

TABLE XVII.—

1864.	Abandoned.	Anchors and Chains.	Burnt or on Fire.		Captured.		Cargo Damaged.	Collision.		Condemned.	Jettison.	Leaky.	
	Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Ships.	Ships.	Stmrs.
January	1	1	—	—	—	—	—	2	—	—	1	2	1
February....	1	—	—	1	2	—	—	2	1	—	—	2	—
March	1	—	—	—	—	—	—	2	1	—	—	—	—
April	1	—	—	—	1	1	1	1	2	—	2	2	2
May.....	2	1	—	—	1	—	—	2	1	1	—	—	—
June	—	1	—	1	—	—	—	5	2	1	—	—	—
July.....	1	—	4	—	5	—	—	—	—	—	—	2	—
August	4	—	—	1	2	—	—	1	5	—	1	2	—
September	2	2	—	—	2	1	—	7	—	—	—	6	—
October	1	1	—	—	—	—	—	4	3	—	1	3	—
November	1	1	—	—	6	—	—	4	—	3	1	—	—
December	1	1	—	1	2	1	—	4	1	—	—	3	—
Total	16	8	4	4	21	3	1	34	16	5	6	22	3

TABLE XVIII.—

1864.	Abandoned.	Anchors and Chains.		Burnt or on Fire.		Captured.		Cargo Damaged.	Collision.		Condemned.	Jettison.	Leaky.
	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Ships.	Ships.
January ...	7	1	—	2	2	3	—	—	8	2	1	—	1
February....	5	3	—	4	—	8	2	—	5	4	3	—	2
March	1	—	—	10	—	2	1	—	6	2	1	—	2
April	2	2	—	3	1	7	1	—	6	—	1	—	—
May.....	3	—	—	2	—	4	—	—	4	1	—	—	—
June	4	—	—	3	—	2	3	—	3	1	—	—	2
July.....	2	—	—	3	—	2	—	—	1	1	—	—	—
August	7	—	—	2	—	51	—	—	3	—	—	—	2
September	4	4	1	—	—	1	—	—	10	1	—	1	2
October ...	5	8	—	1	1	—	—	—	16	1	—	—	2
November	11	2	—	8	1	5	1	—	16	2	—	1	2
December	3	2	—	4	—	3	—	5	17	2	1	1	2
Total ...	54	22	1	42	5	88	8	5	95	17	7	3	17

Foreign Coasters.

Machinery Damaged, or Short of Coals.	Missing.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.	Wrecked.		Total.	
Steamers.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.
1	1	1	—	20	2	5	—	—	9	—	43	4
—	1	3	1	3	2	—	1	—	6	—	20	6
1	3	7	—	9	1	1	—	—	9	—	32	3
—	—	4	—	14	1	2	—	—	10	1	38	7
—	—	—	2	14	—	5	1	2	13	—	41	4
—	—	72	2	10	1	5	—	—	12	1	106	7
—	—	2	—	11	—	1	—	—	6	—	32	—
—	—	2	—	17	5	2	1	—	20	4	51	16
—	—	7	—	13	3	2	1	—	15	2	56	7
—	—	14	3	30	4	18	—	—	14	5	86	15
—	—	11	2	31	5	10	2	1	8	—	77	9
1	—	4	—	19	3	9	—	—	12	2	55	9
3	5	127	10	191	27	60	6	3	134	15	637	87

Unidentified Voyages.

Machinery Damaged, or Short of Coals.	Missing.	Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.		Wrecked.		Total.	
Steamers.	Ships.	Ships.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.	Ships.	Stmrs.
—	—	1	8	—	11	2	6	—	—	—	21	—	70	6
—	—	1	6	2	11	—	5	—	—	—	15	1	68	9
—	—	2	1	1	6	3	3	1	—	—	2	—	36	8
—	—	—	7	—	15	—	1	—	—	—	5	1	49	3
2	—	3	2	—	19	2	1	—	9	2	11	—	58	7
—	—	—	2	2	12	—	6	1	—	—	1	—	35	7
—	—	—	4	—	9	2	11	—	—	—	7	—	39	3
—	—	—	6	—	16	1	6	—	—	—	16	1	109	2
—	—	—	3	—	22	3	10	—	—	—	7	1	64	6
—	—	—	6	—	17	—	4	2	—	—	14	—	73	4
—	3	—	8	—	28	2	6	—	—	—	17	—	107	6
1	—	—	10	—	27	1	5	1	—	—	21	2	101	7
3	3	7	63	5	193	16	64	5	9	2	137	6	809	68

Annua

1864. To.	Abandoned.		Anchors and Chains.		Burnt or on Fire.		Captured.		Cargo Damaged.	Cargo Shifted.	Collision.		Condemned.		Jettison.	
	Ship.	Stm.	Shp.	Stm.	Shp.	Stm.	Shp.	Stm.	Ships.	Ships.	Shp.	Stm.	Shp.	Stm.	Shp.	Stm.
Africa :—West Coast, Cape de Verds, &c.	1	—	1	—	1	—	—	—	—	—	3	—	—	—	—	—
America : — North, British Territory	5	—	—	—	—	—	2	1	—	2	1	1	1	1	2	—
America :—North, States	4	—	1	—	4	10	38	28	—	1	9	2	—	—	2	1
Australia, New Zealand, and Tasmania	—	—	3	—	3	—	—	—	4	1	5	—	—	—	1	—
Baltic, Norway, White Sea, &c.	8	1	6	—	1	1	26	1	2	—	23	3	—	—	1	—
Belgium, Holland, and West Coast of Denmark	5	—	—	—	—	—	2	—	—	—	1	8	—	—	1	1
Brazils and River Plate, &c.	—	—	1	—	—	—	1	—	—	—	8	—	—	—	2	—
Cape of Good Hope, Ascension, St. Helena, Algoa Bay, &c.	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—
China and Oriental Archipelago, &c.	3	—	2	—	6	—	1	—	—	—	7	—	2	—	—	—
East Indies, Birmah, &c.	1	—	15	—	5	—	—	—	3	—	9	1	—	—	2	—
France, Portugal, Azores, Spain, Outside Straits, Gibraltar, &c.	2	—	5	—	—	—	—	1	2	—	26	2	—	—	—	—
Mediterranean, Black Sea, Azof, &c.	8	1	4	1	3	2	1	—	2	1	36	3	2	—	7	—
Pacific, West Coast of South America, &c.	3	—	—	—	2	—	1	—	1	2	2	—	2	—	1	—
West Indies, Vera Cruz, Belize, Coast of Carribean, &c.	4	—	3	2	14	—	3	1	—	—	21	2	3	—	—	—
Total	44	2	43	3	41	13	75	32	14	7	151	22	10	1	19	2
Coasters	28	—	56	—	15	2	1	—	4	4	213	65	—	—	1	—
Cross Voyages	18	1	3	—	7	—	9	2	1	—	19	1	7	—	5	—
Foreign Coasters	16	—	8	—	4	4	21	3	1	—	34	16	5	—	6	—
Unidentified Voyages	54	—	22	1	42	5	88	8	5	—	95	17	7	—	3	—
Total	116	1	89	1	68	11	119	13	11	4	361	99	19	—	15	—

ummary.

Leaky.		Machinery Damaged or Short of Coals.	Missing.		Mutiny or Sickness.		Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.		Wrecked.		Total.	
ip.	Stm.	Steamers.	Ship.	Stm.	Ships.	Stmrs.	Ships.	Stmrs.	Ship.	Stm.	Shp.	Stm.	Ships.	Stmrs.	Shp.	Stm.	Ships.	Stm.
3	—	—	—	—	—	—	6	—	1	—	—	—	1	—	2	—	19	—
2	—	2	1	—	—	—	15	1	19	3	1	1	1	—	19	2	81	12
31	2	4	3	—	—	—	50	2	22	11	1	3	2	—	2	1	170	64
7	—	—	1	—	—	—	7	2	5	—	—	—	3	—	3	—	43	2
18	—	2	1	—	1	—	25	—	96	8	21	1	1	—	30	3	260	20
9	—	1	2	—	—	—	5	1	18	14	7	—	1	—	8	—	59	25
10	—	—	1	—	2	—	8	1	27	—	1	—	2	—	14	—	77	1
2	1	—	—	—	—	—	2	—	1	—	—	—	—	—	1	—	10	1
10	—	1	3	—	—	—	11	—	12	1	2	—	3	—	10	—	72	2
14	—	1	3	—	2	—	34	6	76	11	11	1	2	—	16	6	193	26
23	—	—	4	—	1	—	34	1	42	6	13	—	3	—	13	—	168	10
28	1	7	3	2	2	—	36	4	40	10	23	—	3	1	16	—	215	32
9	—	—	—	—	3	—	11	—	7	—	4	—	4	—	1	—	53	—
24	2	7	—	—	2	1	13	4	31	6	9	2	7	—	20	2	154	29
200	6	25	22	2	13	1	257	22	397	70	93	8	33	1	155	14	1,574	224
90	5	3	5	—	1	—	112	11	407	27	161	12	3	—	87	3	1,188	128
38	1	3	1	—	4	—	57	1	80	8	17	1	5	—	42	2	313	20
22	3	3	5	—	—	—	127	10	191	27	60	6	3	—	134	15	637	87
17	—	3	3	—	7	—	63	5	193	16	64	5	9	2	137	6	809	68
167	9	12	14	—	12	—	359	27	871	78	302	24	20	2	400	26	2,947	303

Annual

1864. — From.	Abandoned.	Anchors and Chains.	Burnt or on Fire.		Captured.		Cargo Damaged.		Cargo Shifted.	Collision.		Condemned.	Jettison.	
	Ships.	Ships.	Shp.	Stm.	Shp.	Stm.	Ship.	Stm.	Ships.	Ship.	Stmr.	Ships.	Shp.	Stm.
Africa:—West Coast, Cape de Verds, &c.	—	—	—	—	—	—	—	—	—	1	1	—	—	—
America: — North, British Territory	20	3	2	—	—	1	—	—	—	10	2	—	7	—
America:—North, States	12	1	4	3	36	21	1	—	1	6	3	2	3	8
Australia, New Zealand, and Tasmania	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Baltic, Norway, White Sea, &c.	28	14	1	—	12	1	7	1	8	36	6	1	17	1
Belgium, Holland, and West Coast of Denmark	2	3	—	1	1	—	—	—	—	9	4	—	—	1
Brazils and River Plate, &c	1	1	2	—	—	—	—	—	—	9	—	3	—	—
Cape of Good Hope, Ascension, St. Helena, Algoa Bay, &c.	—	2	—	—	1	—	—	—	—	1	—	1	—	—
China and Oriental Archipelago, &c.	2	—	1	—	1	—	1	—	—	4	—	1	1	—
East Indies, Birmah, &c.	4	5	5	—	—	—	3	—	2	13	1	4	2	—
France, Portugal, Azores, Spain, Outside Straits, Gibraltar, &c.	3	4	1	—	—	—	—	—	—	13	2	—	1	—
Mediterranean, Black Sea, Azof, &c.	7	1	3	4	—	—	1	—	4	26	2	—	7	1
Pacific, West Coast of South America, &c.	—	—	2	—	3	—	—	—	—	3	—	2	—	—
West Indies, Vera Cruz, Belize, Coast of Carribean, &c.	1	—	—	—	2	—	3	—	—	11	1	5	—	—
Total	80	34	21	8	56	23	16	1	15	142	22	19	38	11

General

1864.	Abandoned.		Anchors and Chains.		Burnt or on Fire.		Captured.		Cargo Damaged.		Cargo Shifted.	Collision.		Condemned.		Jettison.	
	Ship.	Stm.	Shp.	Stm.	Shp.	Stm.	Ship.	Stm.	Ship.	Stm.	Ships.	Ship.	Stm.	Shp.	Stm.	Shp.	Stm.
To	44	2	43	3	41	13	75	32	14	—	7	151	22	10	1	19	2
From	80	—	34	—	21	8	56	23	16	1	15	141	22	19	—	38	11
Coasters, Cross Voyages, Foreign Coasters and Unidentified Voyages	116	1	89	1	68	11	119	13	11	—	4	361	99	19	—	15	—
General total	240	3	166	4	130	32	250	68	41	1	26	653	143	48	1	72	13

ummary.

Leaky.		Machinery Damaged or Short of Coals.	Missing.		Mutiny or Sickness.	Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.		Wrecked.		Total.	
Ship.	Stmr.	Steamers.	Ship.	Stmr.	Ships.	Ships.	Stmr.	Ship.	Stmr.	Ship.	Stm.	Ships.	Stmr.	Ship.	Stmr.	Ships.	Stmr.
2	—	—	2	—	2	1	—	3	—	—	—	—	—	5	—	16	1
25	—	1	1	—	—	20	—	36	1	1	—	1	—	8	1	134	6
15	—	3	1	—	—	14	1	7	6	2	1	4	—	1	—	110	46
1	—	1	—	—	—	4	—	—	—	—	—	1	—	—	—	6	1
93	1	3	19	1	1	57	—	151	6	18	1	10	2	37	—	510	23
9	1	1	3	—	—	3	—	17	6	3	—	—	—	1	—	51	14
11	—	2	1	—	3	11	—	10	—	2	—	6	—	4	—	64	2
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—
20	—	2	1	—	—	14	—	14	1	1	—	3	—	6	—	70	3
50	—	2	2	—	3	53	1	72	8	11	1	5	—	19	2	253	15
14	1	2	3	—	—	15	1	29	2	9	1	3	—	5	2	100	11
53	2	4	4	—	2	35	1	64	4	13	—	9	—	39	—	268	18
10	—	—	—	—	—	11	—	10	—	2	—	2	—	2	—	47	—
17	—	—	1	—	7	26	—	21	1	3	1	6	—	24	—	127	3
321	5	21	38	1	18	264	4	434	35	65	5	50	2	151	5	1,762	143

Summary.

Leaky.		Machinery Damaged or Short of Coals.	Missing.		Mutiny or Sickness.		Ship Damaged.		Stranded.		Sunk.		Various Damage, Ship and Cargo.		Wrecked.		Total.	
Shp.	Stm.	Steamers.	Ship.	Stmr.	Ship.	Stmr.	Ship.	Stmr.	Ships	Stmr.	Ship.	Stmr.	Ship.	Stmr.	Ship.	Stmr.	Ships.	Stmr.
200	6	25	22	2	13	1	257	22	297	70	93	8	33	1	155	14	1,574	224
321	5	21	38	1	18	—	264	4	434	35	65	5	50	2	151	5	1,762	143
167	9	12	14	—	12	—	359	27	871	78	302	24	20	2	400	26	2,947	302
688	20	58	74	3	43	1	880	53	1,702	183	460	37	103	5	706	45	6,283	760

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